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American Aviation

The Independent Voice of American Aeronautics

JULY 1, 1944

Fortnightly Review

tatesmanship Needed

HE LEADERSHIP which the Civil Aeronautics Board has assumed in llaboration with the Department of State in the plans for development of this nation's postwar international air commerce is heartening. There is o time to lose in putting the machinery n motion.

The work of planning is a much reater challenge to the imagination and o statesmanship than most of us have een inclined to believe. The national elfare is wrapped up closely in our stwar international commerce. No asty decision based on meager knowldge will serve the purposes of future xpansion.

Such a book as "The Geography of orld Air Transport" by J. Parker Van andt which the Brookings Institution as just published should be sufficient o indicate that our knowledge of world ir commerce requirements need much ore study than has been given. We re just beginning to learn about the ar and its future trade routes. The mpact of the airplane on world econny and world trade will be tremenous. The United States has, as has very major power, a huge stake in the r world.

It would seem, therefore, that the bcommittee of the U. S. Senate which as been studying our foreign air policy d itself a vast favor recently when it iled to come out with a report or a solution. Such a report had been exected. On the basis of a sprinkling of -attended executive sessions it would ve been presumptuous indeed for a nate subcommittee to have attempted lay down a pattern or formula for stwar international aviation.

(Turn to page 6)

New Surplus Director

Lt. Col. William B. Harding has taken up duties as director of the Surplus War Property Administration's Aviation Division. Before entering the Army in 1942 he was vice-president of the Defense Supplies Corp. (Story on Page 30.)

Late Bulletins

AAF-Industry Joins Hands

Steps are being taken to appoint a joint committee representing aircraft manufacturers and the AAF Materiel Command to work out unified policies for contract termination settlement and the disposal of surplus planes. The move was initiated by the AAF. The Committee may be named within a week.

Rules to be Relaxed

Charles I. Stanton, CAA Administrator, will submit to the Civil Aeronautics Board shortly a proposed relaxation of the maintenance and repair requirements for private planes. After conferences are held between the CAA and the CAB, the CAB will submit the revised regulations to the industry for comment.

Trend of The News

Congressional Tour: Members of Congress in whose hands rest many important decisions on postwar air policy have completed plans for an extensive aerial tour during which they will inspect various aviation facilities and installations and a number of aircraft factories.

The 11-man Aviation Subcommittee of the House Interstate and Foreign Commerce Committee will leave by air from Chicago Aug. 7 for Alaska and later will cover a part of Western United States. Principal points on the itinerary are: Minneapolis, Fairbanks, Nome, Juneau, Seattle, San Francisco, Salt Lake City, Denver, Kansas City and Chicago. Later in the year the Committee plans to start from California and tour the entire Caribbean area, returning to the U. S. by way of Miami.

New Contracts: Typical of the new aircraft contracts marking the recent changes in the pattern of plane production are the following, announcement of which is released through the office of Louis M. Dreves, chairman of the Los Angeles Production Urgency Committee:

North American, $100,960,000 for P-51s, and a new, unannounced model. Douglas, Santa Monica, $125,800,000 for C-54Bs, with part of the work to be placed at the company's El Segundo plant. Northrop, $74,000,000 for P-61 night fighters. Consolidated Vultee, Downey plant, $601,043 for spare parts for Oxford "V" planes.

Planes to Pans: One indication of possible uses which may be made of aircraft plants as cutbacks develop into cancellations is seen in the steps to take the two Long Island plants of Brewster Aeronautical Corp. out of the aviation industry entirely, and substitute in the place of planes such products as kitchenware, pots and pans.

With the Army and Navy declining to place further orders with Brewster, Zeus Soucek, vice president, announced last week that retooling of the two plants already has been started for the manufacture of civilian products. It was reported that the plants have on hand some $8,000,000 worth of high-specification aluminum, and production of civilian goods was merely awaiting the go-ahead sign

(Turn to page 9)

20¢

When a Thunderbolt strikes . . . anything can happen

A THUNDERBOLT roars over the Channel. Calais coming up! An ack-ack gun barks in German from a flak tower. But not for long. Eight 50-caliber machine guns ram hot steel down its throat.

Work to be done upstairs? A flight of Thunderbolts swoops down from high heaven to scatter a cloud of ME's harrying Fortresses on bombing runs over Berlin.

Work to be done on the "deck"? Two earth-quaking bombs slip from beneath a diving Thunderbolt's wings at tree-top level. A bridge blows up . . . and with it the last chance of Nazi reserves to reach the invasion front.

Flown by the finest pilots in the world, the Thunderbolt comes alive. When it strikes, high or low, anything can happen. Guided by skilled hands, it's a fighter that *does everything*. And when hundreds of them strike, everything *does* happen.

The newest Republic P-47 Thunderbolt, with bubble canopy, gives a pilot around-the-clock vision. With hundreds more "emergency" horsepower, he makes and breaks contact with the enemy at will. New propellers add 400 feet per minute to his climb. With a doubled radius of action, the protection of the Thunderbolt's devastating fire power permits heavy bombers a deeper penetration into enemy territory.

WRITE
THAT BOY TODAY
. . . V-MAIL!

Stratosphere fighter, long distance escort, dive bomber, ground strafer—the Republic P-47 Thunderbolt is a busy plane these invasion days.

Republic Aviation Corporation, Farmingdale, Long Island, New York, and *Evansville, Indiana.*

Republic *firsts* in war point to *firsts* in peace

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Specialists in High-speed, High-altitude Aircraft

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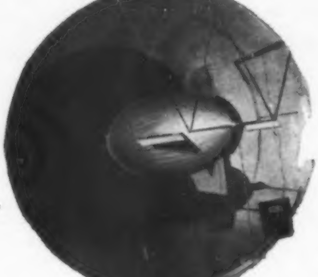
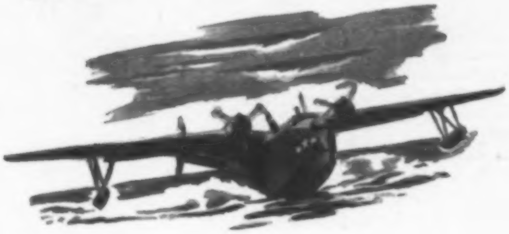
PIONEERING NEW METHODS



GUST EFFECTS ON AIRSHIPS were extensively studied and tested by Goodyear and the Navy long before their importance in building heavier-than-air craft became evident. Special wind tunnel equipment was initiated to simulate, upon scale-model airships, the aerodynamic forces created by gusts of varying intensity. These tests provided the basis for computing stresses resulting from gust disturbances on ships in flight. This long and tedious research contributed importantly to present-day knowledge of the effects of atmospheric disturbances on aircraft — increasingly important today as larger airplanes are being built. This is another example of the breadth of Goodyear's background in aircraft development.

BUILDING PROVEN AIRCRAFT PARTS



THE FAR-RANGING MARTIN PBM-3 is another of America's dependable planes built in part by Goodyear Aircraft. Large numbers of these long-distance patrol bombers now in service are equipped with ailerons, flaps and empennages fabricated by Goodyear. In building such components for the PBM-3 and other famous aircraft Goodyear has the advantage of its long experience and extensive research in all branches of aeronautics—a background that goes back to the very early days of aeronautics. This time-proved skill is further attested by Goodyear's standout record in building complete aircraft, including both the superb Corsair fighter and naval patrol airships.

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3. *By re-engineering parts for quantity production.*
4. *By building complete airplanes and airships.*
5. *By extending Goodyear Research facilities to aid the solution of any design or engineering problem.*

GOODYEAR
AIRCRAFT

Highlights from LAISTER-KAUFFMANN ..."squawk" sheet department

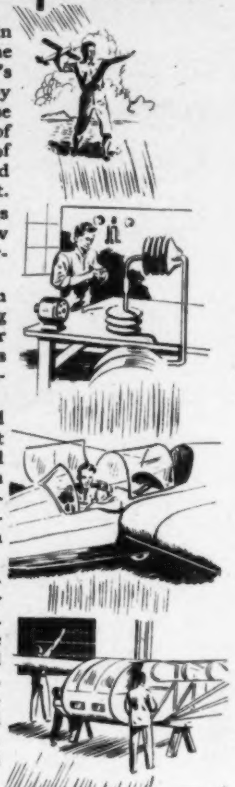
Beside every Laister-Kauffmann glider in production hangs a vital score-board—"the squawk sheet"—on which each hour's progress of the giant craft is reflected by its inspection ratings. The inspector, whose job it is to check every minute detail of construction, makes a complete report of any flaw—a "squawk", to the men and women who sweat to make gliders perfect.

Red-letter days, when a glider comes through without a single squawk, are now piling up without respect to urgent, accelerated production.

Howard Blossom, Laister-Kauffmann Chief of Inspection, doesn't mind being "head squawker"—because, as a glider pilot with seven years' experience, he knows the absolute importance of faultless construction.

Blossom, whose technical background includes an engineering degree earned at the California Institute of Technology and Washington University, stepped right from school into a job making research laboratory equipment. This led to work as a consulting engineer, dealing principally with electronic apparatus.

During these years Howard Blossom became interested in gliding . . . a carryover from his boyhood study of model planes. His week-end and vacation sport became so fascinating that he decided to mold hobby and training into a new profession. Soon the chance came... the Laister-Kauffmann Aircraft Corporation was awarded contracts to build gliders for the Army . . . and Howard Blossom joined the firm as Chief of the Inspection Department.



William Moehring, Laister-Kauffmann Ass't Chief Inspector, and Bill Predock, Inspection Supervisor, both say their chief is a swell guy . . . but the most conscientious, thorough-going slave driver they ever met. Howard Blossom laughs at this, insisting that Moe and Bill wouldn't let him slow down if he wanted to! Moehring and Predock, experts in wood, metal and fabrication, help make L-K gliders what they are today.

From the day its first glider was delivered to the Army, Laister-Kauffmann has been turning out gliders that take unbelieveable punishment. Now, invasion-scarred, they have won their place among our achievement-proved weapons of war.

Wings for the Future

Laister-Kauffmann
Aircraft Corporation
ST. LOUIS (17) MISSOURI

American Aviation

Vol. 8 No. 3 July 1, 1944

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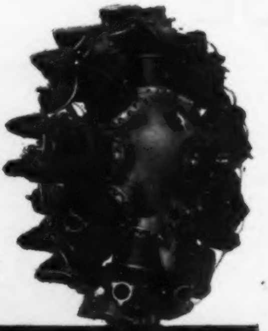

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Editorial

(Continued from page 1)

What we do internationally in the air after the war is a basic national issue. It is vitally important for this nation's industry, commerce, national security and national prestige. Personal ambitions, personal empires and personal gain must be made subservient to the public good without destroying private initiative and enterprise. The airplane must not be used as a private or political football—it is the most ingenious, valuable and swift means of transportation which man has devised, and must be used as such. This is a time when statesmanship and leadership is required both in government and in industry.

Perhaps the greatest educational need of all is in Congress. Various Senators are talking about "sovereignty of the air" as though this were an issue. It isn't at all. No nation, and especially this nation, will ever give up sovereignty of the air, and the agreement to an international principle of freedom of transit (innocent passage) with stops permitted for refuelling, repairs and emergencies, is in no way a signing away of our ownership of our airspace. Unless this principle is adopted by all or most of the nations of the world, the use of the airplane as a carrier of passengers, mail and cargo will be materially restricted.

The confusion is between freedom of transit with technical stops, and rights for commercial transit which involves the right to discharge and take on passengers and cargo. The latter is a matter for bilateral agreements among the nations.

In any event, the CAB is now in a position to move forward on plans and hearings. In the meantime the Senate should devote much more time toward establishment of a policy that will guarantee this nation's adequate participation in the world airways. Much more than a few executive sessions is required. And much more is required than the assiduous work of a few Senators in endeavoring to saddle the nation with a policy without open debate, open discussions, and a thorough airing of the issues.

A Staff College Needed

THE ARMY AIR FORCES and the Navy frankly admit they don't know all the answers to air power. It is not possible that they could have all the answers at this stage of the war, for genuine air power is only now getting its real baptism. But the current war is giving our airmen a tactical background that is laying the groundwork for a new theory of military aviation.

What the AAF and the Navy should be doing now is to make plans for an Air Staff College which can take the lessons now being learned and develop military aviation theory for the future, comparable to the tremendous amount of staff work exerted for tanks, infantry, battleships, and other traditional means of warfare.

A vast amount of preparation has been made in aircraft production, training, supply lines, and tactics. But no one yet knows the full effect of our air power against the enemy. Aerial photographs tell the story as far as specific large targets are concerned, but it is quite clear we don't yet know the full story on communications, over-all production, supply lines and other features of the enemy territory. The answers won't be known until

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For 1500 psi Operating Pressure

Total Volume . . . . . . 68.8 cu in.
(WITH DIAPHRAGM INSTALLED)

Weight, dry (COMPLETE) . . . . 3.50 lb

Volume/Weight ratio 19.7 cu in./lb

These accumulators comply with Winterization Specifications of the Army Air Forces for operation between —65°F and 160°F.

VICKERS 10" ACCUMULATOR
For 1500 psi Operating Pressure

Total Volume . . . . . . 532.2 cu in.
(WITH DIAPHRAGM INSTALLED)

Weight, dry (COMPLETE) . . . . 14.95 lb

Volume/Weight ratio 35.6 cu in./lb

They also provide
MAXIMUM CAPACITY

The weight saving in aircraft hydraulic systems resulting from the use of Vickers Accumulators is evident from the weights and volumes given above. We believe Vickers Accumulators have the highest volume/weight ratios of any accumulators available today. Maximum capacity is another important feature of Vickers Accumulators: the volumes of both the 5" and 10" sizes approach the high limits of the AN Accumulator Specifications.

The increasing importance of adequate evaluation of weight reduction in aircraft will make these facts about Vickers Accumulators of particular interest to design and weight analysis engineers.

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more enemy territory is conquered. But it is essential that the vast amount of knowledge being gained in the world's first demonstration of real air power should be sifted and refined into manuals, textbooks and plans. A staff college on air power is a real need.

How About a Home Pattern?

WITH GREAT FLOURISH the Civil Aeronautics Board unrolled a proposed network of world airlines for the United States. It was a good idea. Tentative though the plan may be, the CAB nonetheless has an idea of where it thinks our foreign air commerce routes should be.

All of which brings up the question of the United States itself. If the CAB can propose a sound plan for the world, why not do the same for the internal airline system. At no time has the CAB announced a plan of sound, economic development of an integrated network for the nation. Each new route case is decided as though it had no relation to the rest of the country or to a well-conceived rational plan.

Perhaps no sound detailed plan can be promulgated at this time, but at least the CAB could bring forth the same type of proposal that it has compiled for foreign routes. As it is now, no airline in the country knows what to expect next. The competitive principle has gone to such an extreme in some decisions that one might well expect the Board to elucidate and give the industry an inkling of where it is going—that is, if it knows. We think the time has come for CAB to make some official pronouncements on a national network.

Policy on Feeders

THE CIVIL AERONAUTICS BOARD would do a great service to aspirants for feeder airline routes if it would make some announcement regarding the recommendations of its examiners in the Local-Feeder-Pickup investigation.

Examiners Madden and Beitel Feb. 9 made 11 specific recommendations for the future expansion of domestic air transportation, with particular reference to local services.

Since the recommendations were submitted, the Board has set in motion administrative procedures for the hearing of applications for service such as is envisioned in the feeder report, but the Board has remained silent on policy.

It may be, as Paul M. Godehn, counsel for United Air Lines, stated in oral argument recently, that the Board may not legally make known specific policies ahead of actual hearing, for in a sense that would amount to prejudging a case before it came to trial. If this is the Board's position, it should say so.

As it now stands, applicants are preparing to appear in route cases without knowing the rules of the game. Will single-engine planes with single pilots be permitted in local operations? Will airmail pay be set at not to exceed 25 cents a mile as the examiners recommended? Will existing carriers be restricted from serving new points that are under 25,000 population? These are some of the many vital points at issue—the rules of the game, so to speak.

The Board should make some pronouncement on feeders before much time and money are wasted in lengthy hearings. The Board must have ideas on the subject, else the hearings on feeders would not have been set in motion.

Air Transport By Whim

ON JUNE 6 the Canadian Minister of Munitions and Supply introduced into the House of Commons a bill which would effectively put out of business the Canadian Pacific Air Lines organization which has contributed much to aviation development in Canada.

In the course of the debate, the following took place:

MEMBER: *"In fact, it makes the Minister a dictator in respect of all the airways in Canada, does it not?"*

MR. HOWE: *"Perhaps so; but who would you suggest should be dictator?"*

With a literary gem such as this, it is hardly necessary to waste any more space on Canadian air policy. Mr. Howe and Canada's air policy are apparently one.

How simple it all is! No bother about public convenience and necessity, no bother about the public's wishes, no tedious quasi-judicial proceedings—nothing bothersome at all. Just Mr. Howe. But it's going to be tough on some city that wants air service and applies on the morning Mr. Howe's cup of coffee is not just right!

WAYNE W. PARRISH.

Trends

(Continued from page 1)

from War Production Board through a clarification of its ruling on the release of aluminum and other metals for civilian use. It was indicated that Brewster would start civilian production with 4,000 workers.

Meanwhile, operation of the Johnsville, Pa., plant will continue under the Navy.

Getting a Law: One way of getting aviation legislation enacted is to have a bill dealing with one phase of the many aviation problems, instead of many phases which may include controversial questions. An example is the Bulwinkle Bill passed by Congress last week, largely as a result of the Supreme Court ruling in the Northwest Airlines tax case.

This Bill, authorizing the Civil Aeronautics Board to make a comprehensive study of multiple taxation affecting the airlines and to recommend corrective measures, was introduced June 2. Its swift passage came as follows: Reported out by House Interstate and Foreign Commerce Committee June 10; passed by House June 19; approved by Senate Commerce Committee June 21; passed by Senate June 22.

This is a near record for speed on legislation of this kind, abetted, of course, by the imminence of the Congressional recess. It may point the way for handling some of aviation's other problems.

New Allocations: Although the allocations are being kept secret, it is learned that the Munitions Assignment Committee has turned over a few transport planes to certain oil companies which need aircraft in their industrial work. The allocations were made on representations from the Petroleum Administration for War, but a moratorium on applications has been declared because of the large number of applicants. One oil company is known to have obtained a Lockheed Lodestar.

Letters

Not Playboys

Montgomery, Ala.

To the Editor:

I note in the June 15th issue your editorial comment entitled "Aviation Terms." With all due respect to Buck Steers I do not believe that the substitution of "recreational flying" for "private flying" would help the situation at all. I base this on the belief that a good deal of private flying will be done in the furtherance of business. In other words, everybody who uses a private plane is not going to be a "playboy." The term "personal flying" would still leave a lot to be desired but at least it would not tie the term down to "recreation."

Regarding the editorial "Wanted: A New Name," it is my opinion that the term "fixed base operator" was originally intended to distinguish the operators that had a fixed place of business from the barnstormers and other small outfits that were continually on the move. Frankly, I have never found any fault with this term. If anybody can come up with a suggestion for a name that would differentiate between the two classes of operators we will be most happy to adopt it.

E. W. STANFORD, Director,
Alabama Aviation Commission.

•

'The Utilities'

Denver, Colo.

To the Editor:

Suggested name for fixed base operators: The Utilities.

Reason for the title: utility defined means fitness for some desirable practical purpose; serviceableness; also that which is necessary . . . And since charter trips, mercy trips and all general flying done by the fixed base operators seems to come under this heading of necessity, I think it practical and appropriate to christen a fixed base operator as a 'utility' operator, or better yet to be known for short as a 'ute.' The major airlines are known as the *major* airlines . . . why not the smaller operators be dubbed the utilities? There is the name. Give it to the fixed base operators and let them start pounding it in their ads. It might catch on.

CHARLES A. SELBY.

•

Dislikes 'Recreational'

Minneapolis, Minn.

To the Editor:

This letter is in response to your editorial comment in *American Aviation* of June 15 concerning aviation terms and "Wanted: A New Name." With all due respect to Mr. Steers, director of aviation of the State of Michigan, we cannot entirely agree with him in the matter of terms. Insofar as the use of the term "promotion" is concerned, yes, we agree 100 per cent that "advancement" is a better word. However, concerning the use of the word "private" flying, we can see no improvement in the use of the term "recreational" flying, and as a matter of fact, we do not believe this is descriptive of the type of flying that is being considered at all.

The very next page of your editorial section has an article "Inviting Gas Rationing" which is very timely, but which is critical of the very thing which the word "recreational" suggests. As far as we are concerned we say stick to "private," "personal," "individual," or "light plane," but do not use "recreational" flying.

It is noted that several years ago at the suggestion of a CAB member, you asked suggestions for a suitable self-explanatory substitute for the term "fixed base operator." We heartily agree with you, and therefore take our Ediphone in hand to suggest the following:

"Aeronautics dealer"
"Aircraft dealer"
"Aviation dealer"
"Local operator"

if for no other reason than to assure you of getting some takers to your inquiry this time.

R. J. YOUNG,
Aviation Services Co.

Books

THE GEOGRAPHY OF WORLD AIR TRANSPORT. By J. Parker Van Zandt. The Brookings Institution, Washington, D. C. 64 pp. $1.00.

This is the first of three volumes under the general heading of "America Faces the Air Age." The forthcoming volumes will be concerned with the relation of civil aviation to air power, and the organization, ownership and operation of world air transport. If the following two volumes are as thoughtfully prepared and contain as much information as the first, they will be eagerly awaited.

The author has long been associated with aviation. At one time he was with Pan American Airways. He has traveled widely by air around the world. He has been associated with the Civil Aeronautics Board, and organized the Office of Air Transport Information prior to joining The Brookings Institution.

This is one of the most informative, most thought-provoking and most significant books on global airways to reach print. It is an important contribution. Small though it is (the main text only runs for 434 pages), it contains a mass of vital information and comment packed into a concise package.

There have been other books on the new global geography which is fast becoming a popular subject of conversation and writing. But this is the first to deal specifically with the realities of air transportation.

There are some excellent maps and tables.

In addition to the news story on the book published on page 23, this issue, it might be commented that Van Zandt has done more than anyone else to outline the true trade areas of the world in terms of the airplane. He debunks many popular conceptions and shows quite conclusively that the vast Pacific Ocean, for example, will not be important in postwar commercial airways. Nor will the Polar regions. And he also debunks the idea that airways will follow the sea lanes. The man from Dallas, Texas, bound for Africa, will travel via Labrador and Europe because this is the shortest route and will carry the greatest volume of traffic.

Perhaps most important of all in the book is the assertion by the author that there is no such thing left as an "irreplaceable" airport with present-day and future aircraft. No nation will be able for long to trade upon its so-called strategic position geographically. Only three major areas stand out in Van Zandt's thesis as being really important—and even these can be by-passed. He names Alaska, Labrador and Eastern Siberia.

He places much emphasis on the value of the all-land route between the U. S. and

(Turn to page 12)

Obituaries

Roy L. Mitchell

Lt. Col. Roy Leland Mitchell, on leave from American Airlines with the Caribbean Wing of the Air Transport Command, died of injuries received in an auto accident at Jackson, Miss., June 21. Funeral services were held at Tallalula, La., June 24. His widow, Virginia Mitchell, survives.

Born in Fremont, Mo., Oct. 11, 1900, Col. Mitchell had been in aviation since he joined the Army at 17, making his first solo flight at Mitchell Field in 1918. He left the Army in 1926 and joined the Flying Corps of the U. S. Dept. of Agriculture which at that time used planes in connection with insect control.

In 1928 he became a pilot for Continental Airlines, a predecessor company of American Airlines. Later, when American Airways was formed of Aviation Corp. subsidiaries, he became operations manager for the Cleveland-Memphis division. In 1936 he became chief pilot on the southern transcontinental route. In 1939 he was appointed eastern operations manager in charge of flying. His title changed to superintendent of flight operations early in 1942 and later that year he was made director of American Airlines' newly organized military operations department. He saw this program well under way before taking his leave of absence in December, 1942, to enter the Army Air Forces as Major. For a time he was assigned to the India-China Wing where he remained until he contracted malaria, following which he was assigned to the Caribbean Wing at Morrison Field, West Palm Beach, Fla.

Col. Thomas L. Thurlow

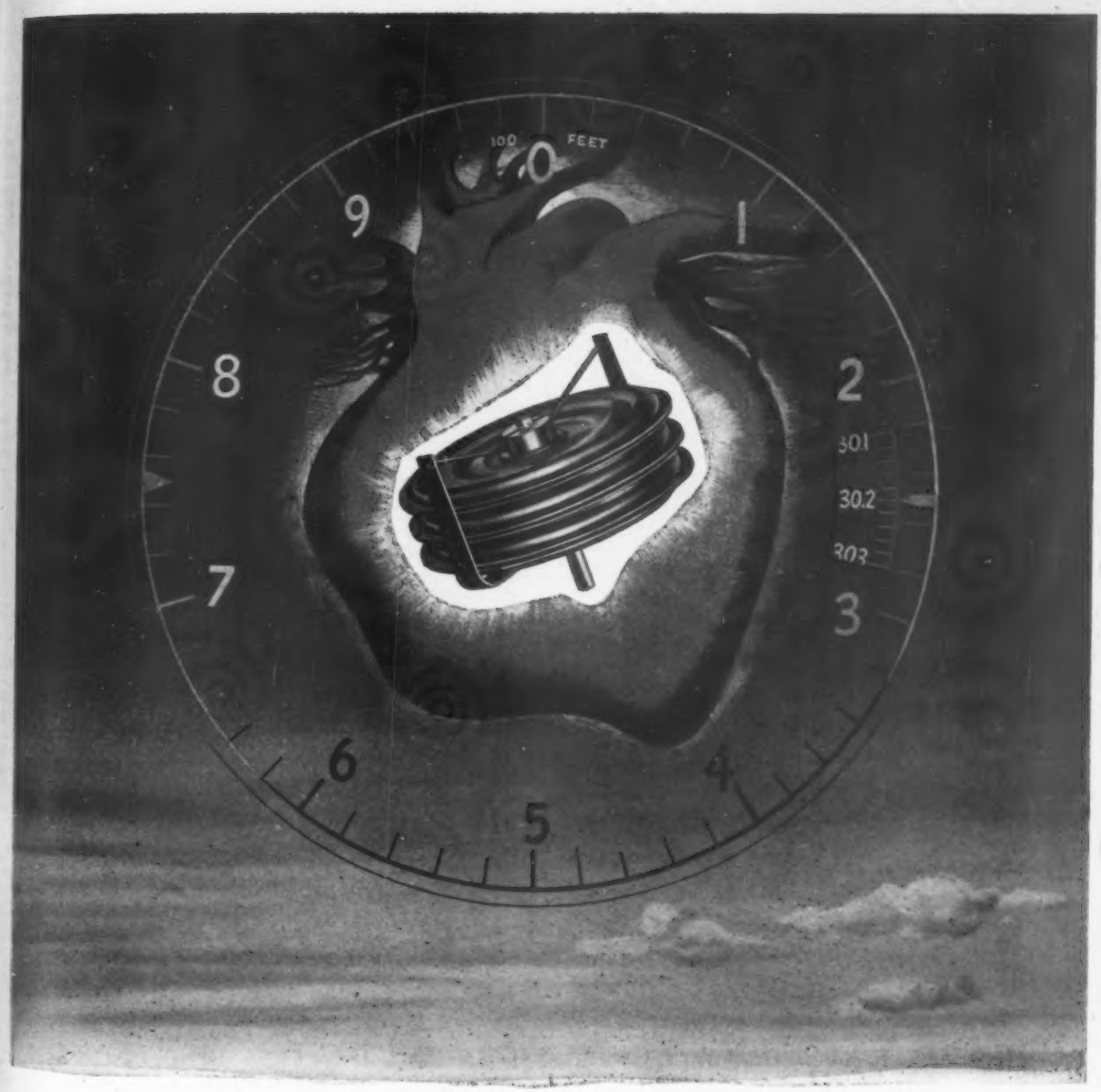
Col. Thomas A. Thurlow, an authority on navigation, was killed recently in a plane crash while enroute from Dallas to Dayton. Col. Thurlow was bound for Wright Field, where he was chief of the instrument and navigation branch, equipment laboratory, Army Air Forces Materiel Command. He was navigator with Howard Hughes in his flight around the world in 1938. A graduate of Stanford University, he was a native of Santa Ana, Cal.

A. L. Wykes

A. L. Wykes, managing director of Taylorcraft Aeroplanes (England) Ltd., was killed May 14 at Leicester, England, while piloting one of his own Auster light airplanes during a display of acrobatics. He was 45 years old. His company obtained manufacturing rights to the Taylorcraft airplanes from the U. S. company several years ago and was producing the Auster, a light plane similar to the U. S. Taylorcraft design, for the British Army.

New Films

The Navy Department has brought out a new film on the use of welding in aircraft production. It is being exhibited by various sections of the American Welding Society, 29 West 39th St., New York.



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(Continued from page 10)

Asia by way of Alaska. This route is considerably north of the bad-weather Aleutians, but not above the Arctic Circle, and reaches the principal centers of population en route, in contrast to the longer and sparsely-settled island route across the Pacific requiring long non-stop hops.

Van Zandt has done an excellent job. He has produced a "must" book for reading on international air transport.

W. W. P.

•

AAF—THE OFFICIAL GUIDE TO THE ARMY AIR FORCES. 380 pp. Illustrated. Published by Simon and Schuster, New York. $2.50.

This is by all odds the most complete book ever published describing the organization, purposes and activities of the Army Air Forces. A foreword has been written by General H. H. Arnold. There is a rather complete directory, an almanac and chronicle of achievement, 64 pages of photographs and 175 drawings and maps. It is completely indexed.

The book should be very popular, appealing to relatives and friends of men in the AAF as well as the men themselves. It is noteworthy not because of any new information it reveals, but because it is a complete story of the huge AAF organization. Since it was prepared by the AAF itself for general sale to the public, there is complete authenticity to everything related.

It tells how an individual trains into and fits into the giant pattern of production lines and planes. Far from glamorizing the pilots, the book gives an even break to every unit of the AAF, describing the functions and responsibilities of individual members or aircrews and ground crews. It discusses everything from types of airplanes to courses of study, areas of military operations, tactics, wing insignia, badges and medals. It even contains a short dictionary of AAF slang. It also gives the biographies of the old-time AAF officers from Hap Arnold himself on down the line. Considering the sad state of the AAF during peacetime when appropriations were meager and AAF leaders criticized and exiled for speaking out on behalf of airpower, the book is an amazing revelation of growth in strength and power.

—W. W. P.

•

LOOK AT THE WORLD. THE FORTUNE ATLAS FOR WORLD STRATEGY. By Richard Edes Harrison. Alfred A. Knopf, New York. $3.50.

The publisher says there has never been an atlas like this one. This is no over-statement. The great full-color large-scale maps drawn from the point of view of the air age, but not distorted, can best be described by the single word "superb". They turn the world around into many unfamiliar angles until the reader is inclined to agree with the text that the geographical isolation of the U. S. "is more seeming than real".

The text is by the editors of *Fortune* and as good as one might expect from this source. The atlas focuses itself more on the global and geographical relationships of the world than upon such matters as population. But Cartographer Harrison has done a brilliant job —a unique product. This is another of the new global books resulting from the war which is going to help postwar citizens to know their world better. This one can be well recommended.

—W. W. P.

•

AIR NAVIGATION MADE EASY. By James F. Naidich. McGraw-Hill. $1.75.

The author is a ground school instructor and chairman of the department of mathematics, Manhattan High School of Aviation Trades, New York City. The book is for private civilian flyers, covering the basic principles of air piloting and dead reckoning. It shows how to read maps, to fly by landmarks, to measure direction, to use the compass, to correct for wind, to plan a trip and to locate position in flight. There are extensive review tests.

LONG-RANGE FLIGHT. By Colin Hugh McIntosh. McGraw-Hill Book Co., New York. 177 pp. $2.50.

American Airlines' chief navigator is author of this comprehensive textbook of fundamentals that must be understood by pilots in order to make use of the charts customarily used by airline operators. Heretofore, the basic principles of long-range aircraft operation have never been presented in a non-technical manner suitable for instruction. McIntosh carefully avoids the engineering approach, explaining methods and procedures from the practical viewpoint demanded by crew members. A pocket on the inside back cover of this volume contains three copies each of the FLIGHT ANALYSIS, FLIGHT PLAN, FLIGHT LOG, and FLIGHT GRAPH blanks actually used on the airlines.

•

COMPOSITE AIRCRAFT MANUFACTURE AND INSPECTION. By Leno C. Michelon. Harper & Bros., New York. 547 pp. $6.00.

Many, many times in this war the life of the pilot and his crew has depended on the vigilance of the aircraft inspector. This oversized handbook with 108 tables and 478 illustrations, provides a complete coverage of all of the basic materials used in manufacturing composite aircraft—the metals, the woods, the plastics, the fabrics. Army and Navy aeronautical specifications are given. The book is indispensable to inspectors and trainees in the inspection field.

New Booklets

A 121 page illustrated booklet entitled "Determination of Means to Safeguard Aircraft from Powerplant Fires in Flight," has been issued by the Civil Aeronautics Administration. The study was made by A. W. Dallas and H. L. Hansberry and is issued as Technical Development Report No. 33.

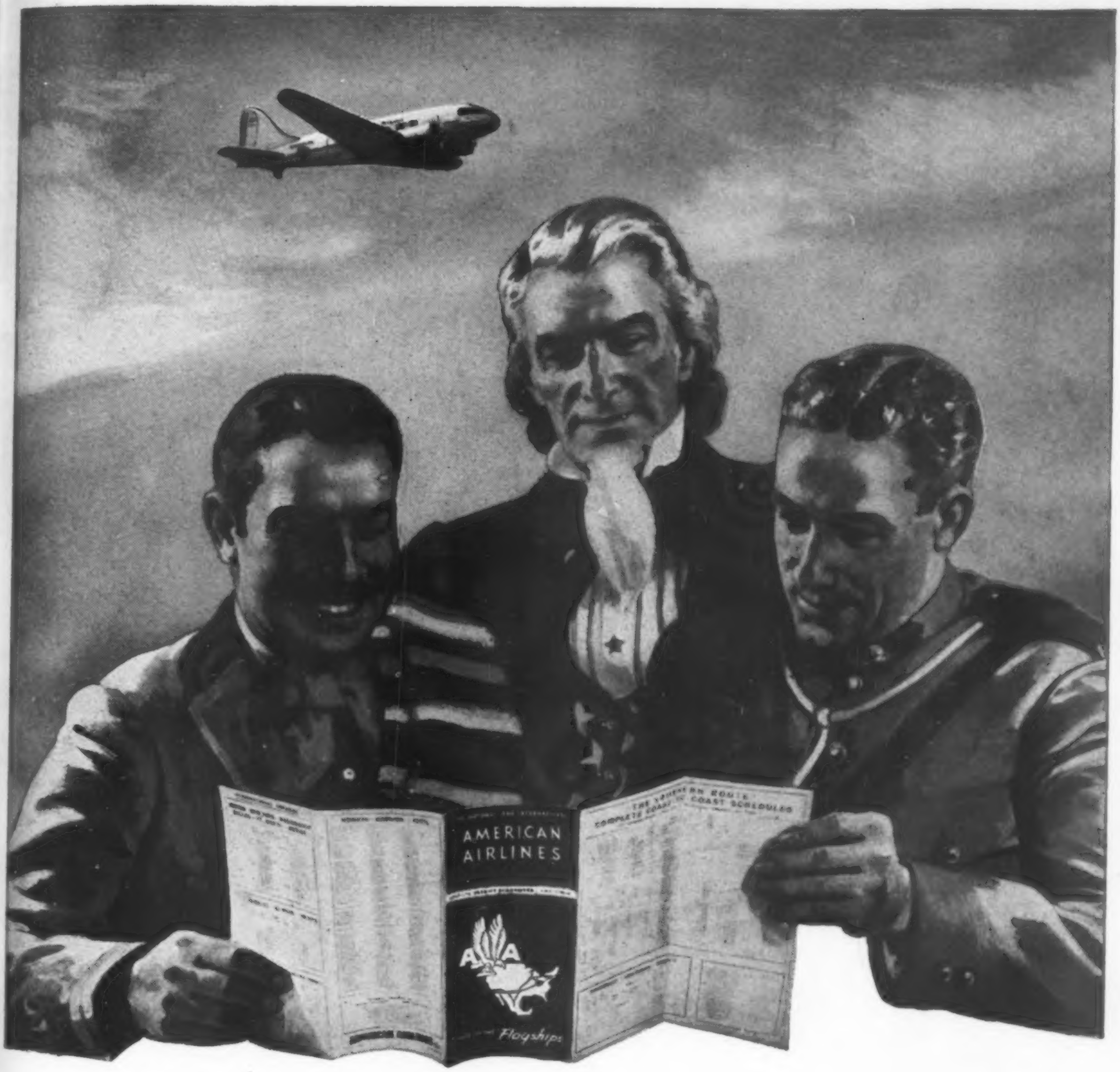
Pan American-Grace Airways has just released a booklet forecasting the postwar travel trend to South America and explaining how Panagra is planning to meet the increased demand there for improved and faster air transportation.

"The ABC of the AAF" is expected to be the designation of a monumental book to be published by the Army Air Forces. It will give the most comprehensive treatment of the Air Forces, the types of planes used etc. ever assembled. The book is being printed in New York. Wide distribution to aircraft workers is being considered.

An analysis of the potential role of America's postwar commercial aviation as a factor in building and maintaining a peace based on sound international trade relations is given in the booklet "Pax Aeronautica," just published by the Schroeder Trust Co., New York.

Malabar Machine Co. has issued a reference book on hydraulic jacks for planes showing blueprint specifications of a variety of types of jacks. It describes weight indicators for cargo loading and includes a complete parts list and manual on hydraulic jack maintenance.

A new aircraft catalog and handbook with comprehensive sections on AN fittings, AAF 811 fittings, aircraft hose and hose assemblies, valves and hydraulic cylinders, and a compilation of useful engineering data is announced by the Weatherhead Co., Cleveland.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Vol. 8 No. 3
July 1, 1944

American Aviation

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This Issue

Major Steps Taken for World Air Policy

CAB Lists Routes Needed for U. S. Lines, Sets Hearings; Clark Report Held Up

By WAYNE W. PARRISH

CAB Sets Dates

Dates for prehearing conferences and hearings on all applications for international air services (outside the Western Hemisphere) were set by the CAB June 22 as follows:

Area	Rehearing	Hearing
North Atlantic	Aug. 1	Oct. 16
South Atlantic	Aug. 2	Nov. 1
North Pacific	Sept. 1	Dec. 13
Central Pacific	Sept. 15	Jan. 10
Australia	Oct. 2	Feb. 1

AMERICA'S INTERNATIONAL AIR PROGRAM moved forward dramatically in mid-June. Although the controversial question of monopoly versus competition remained unsolved, the Civil Aeronautics Board took two major steps in bringing the international air problems closer to solution.

Three important developments in the last fortnight were:

- On June 14 the CAB outlined to a press conference the international air routes which it has tentatively concluded would be desirable for postwar operation by United States air carriers and at least by inference, if not in fact, indicated it favored competition in the foreign field.
- The subcommittee of the Senate Commerce Committee, headed by Senator Bennett Champ Clark (D., Mo.), came very close June 22 to issuing a report favoring a single chosen instrument for our foreign air commerce, but decided instead to issue no report at all for the present. Thus, it would appear there will be no action by the Senate group for some time in view of pending political activity in the nation.
- On June 22 the CAB followed its world airway announcement by setting dates for prehearing conferences and for hearings on five groups of applications for as many areas of the world. The speed with which the CAB is acting is indicated by the fact that the North Atlantic prehearing conference will be held as early as August 1.

CAB Has Green Light

While the Senate has made it quite clear to the CAB that it will establish foreign air policy for the U. S., it also is clear that the CAB has received a green signal to proceed with full hearings on applications for foreign routes, leaving the question of a single foreign operator, or many, left for solution at a later time.

On the other hand the Administration is showing signs of determined leadership in the international aviation field and it was perhaps significant that the CAB in its official announcement June 14 said applications would be brought to hearing "and final decision" as speedily as circumstances of war will permit.

At the press conference CAB Chairman L. Welch Pogue indicated quite emphatically that the CAB would continue to act under existing law (the Civil Aeronautics Act of 1938) until such time as contrary legislation was enacted, and he cited the section in the act relating to competition. It seems clear that the CAB at least intends to grant all applicants the right to plead their cases before the Board—and unless the law is changed by Congress, or unless the Board itself adopts a new attitude, there will be more than one U. S. carrier in the foreign field.

Operating Pacts Needed

The CAB stated that it is fully aware that most of the applications on file for foreign services involve air transportation to and through nations with which we currently have no operating arrangements. Therefore, in going forward with the hearing at this time the Board pointed out that it is merely following the statutory requirement that findings of public convenience and necessity shall be made as a result of hearings thereon, and that while this action by the Board is designed to permit the inauguration of United States air carrier service abroad at the earliest practicable moment, the Board emphasized that obviously no services can be inaugurated on any of the new routes proposed unless and until suitable arrangements have been concluded with the foreign nations concerned.

The Board also called attention to the previously stated policy of the U. S. Government to the effect that the acquisition of foreign landing rights is expected generally to be by means of intergovernmental negotiations.

"For some time the Board has been making studies to determine the future need for air transportation to other sections of the world which might be rendered by United States air carriers," the announcement said. "The Board arrived at its tentative conclusions concerning new international air services as a result of these studies and consultations with other interested agencies of the Government, the aviation industry and other interested parties.

"It believes that these tentative conclusions will afford a basis for the hearings on applications for certificates of public convenience and necessity to engage in foreign air transportation, although it recognizes that future developments and further study may require some changes in the route pattern as now proposed."

Pogue made it clear that applicants may amend their applications in any way they see fit and that the CAB's tentative world routes are subject to change and should be considered only as a guide.

He also said the Board had informed four Senate and House committees in considerable detail as to the program—and presumably had not received any objections from any committee.

He also said that foreign governments had been informed of the program through diplomatic channels.

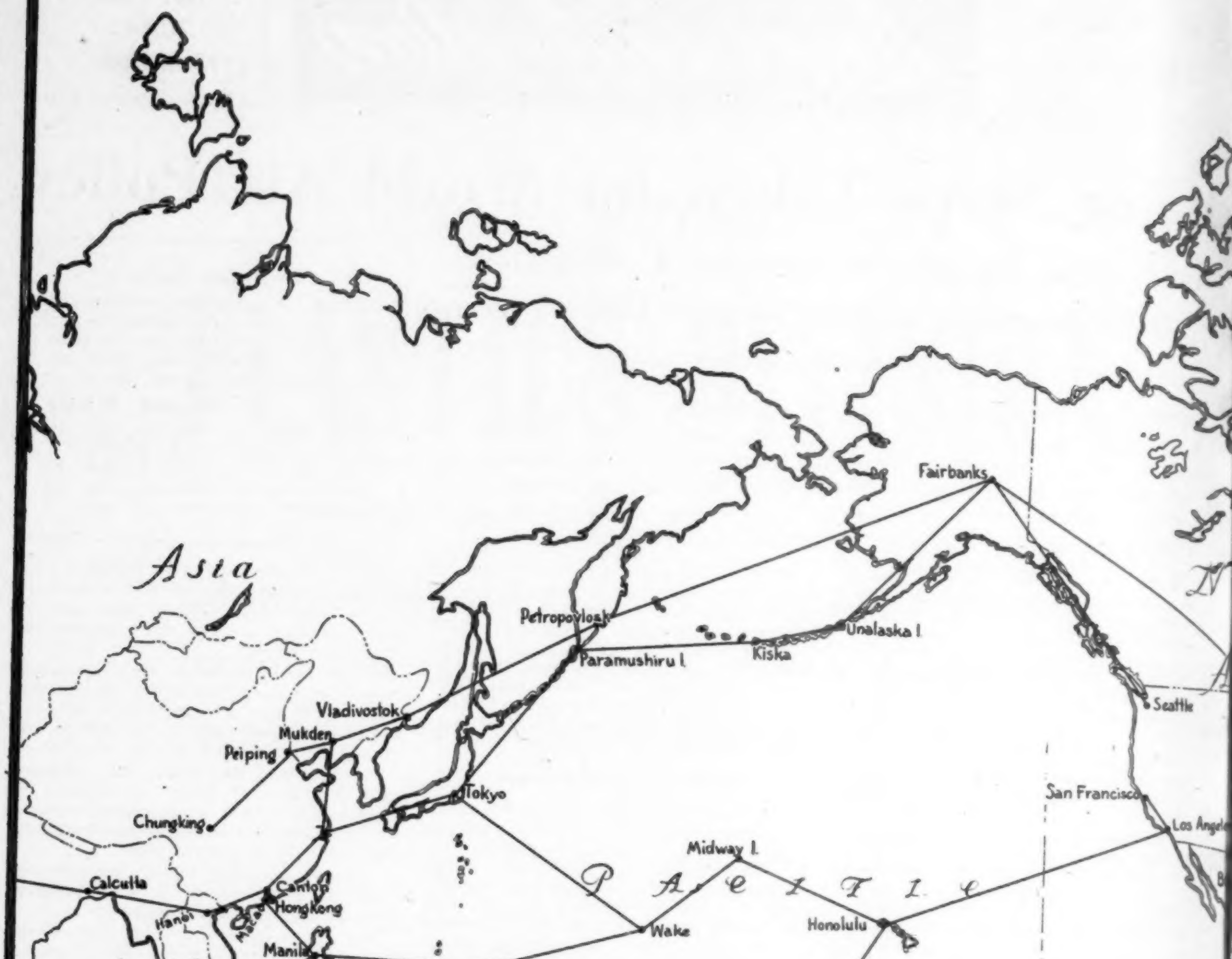
Routes to Mexico, Canada and Alaska are not included in the global program.

Out of the total of 140,000 route miles outlined on the Board's map, approximately 80,000 are already certificated. Of this 80,000 all belong to Pan American Airways except for the American Export Air Lines route to Europe.

On June 22 the Board announced that it had divided up its proposed foreign routes into five groups, with Calcutta as the dividing line between Atlantic and Pacific groups. Besides the North and South Atlantic, there are separate hearings for the North Pacific, the Central Pacific and Australia. Applications between the mainland and Hawaii are listed in the Central Pacific group.

Brewster Sought Report

Meantime, with Congress recessing for the national political conventions, and with primaries and elections coming soon after, it did not appear likely that the Senate Commerce subcommittee would rush out with a report on air policy, although it was freely admitted that the Committee came very close to issuing a report on June 22. The primary force behind the move to issue a report was Senator Owen Brewster (R., Me.), staunch advocate of a single chosen instrument for our foreign air commerce. Senator Brewster even flew in a special plane to North Carolina June 21 in an effort to persuade Senator Josiah Bailey,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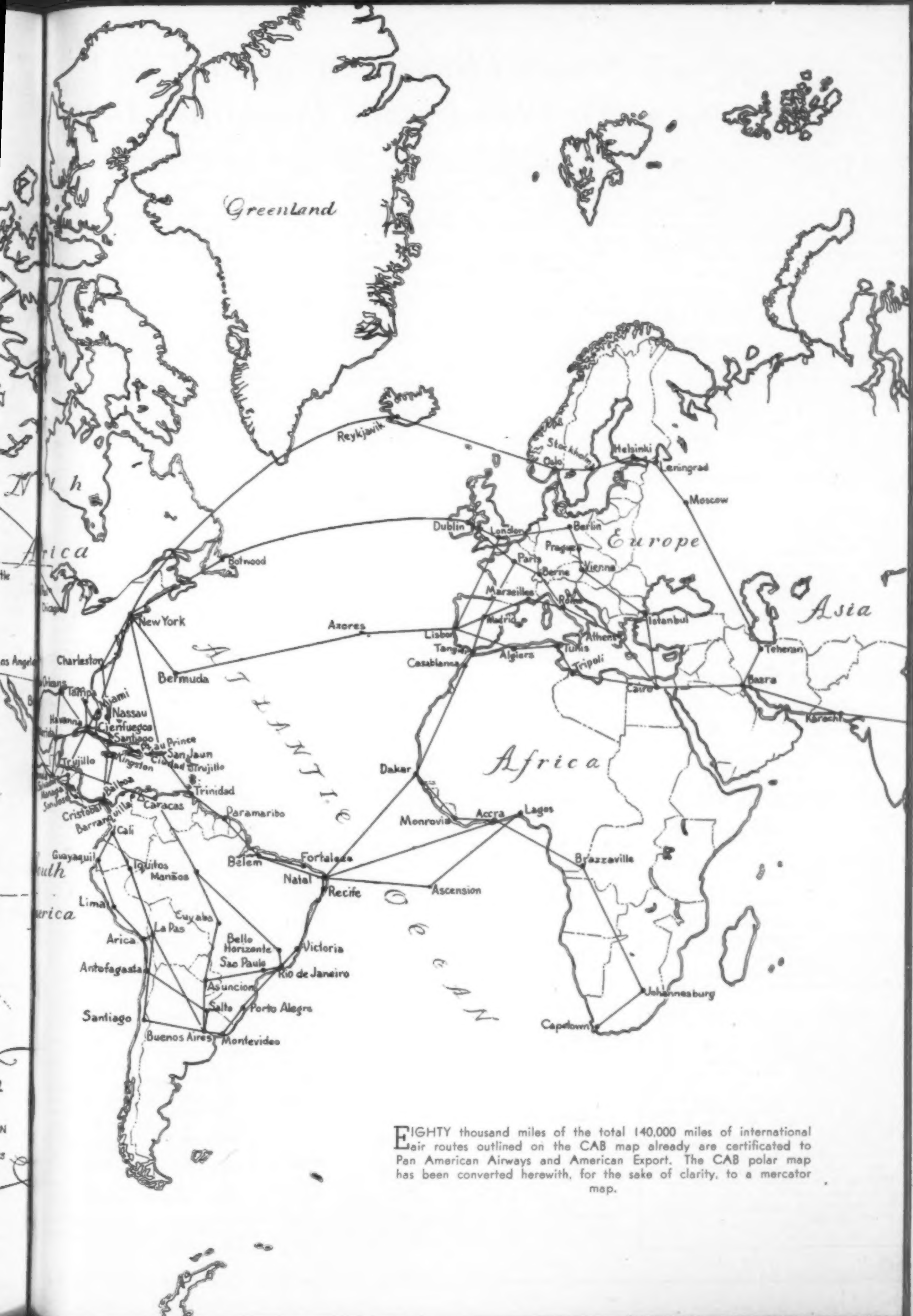
for
DESIRABLE POSTWAR OPERATION
by
United States Air Carriers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Capetown

EIGHTY thousand miles of the total 140,000 miles of international air routes outlined on the CAB map already are certificated to Pan American Airways and American Export. The CAB polar map has been converted herewith, for the sake of clarity, to a mercator map.

chairman of the full Commerce Committee, to come to Washington to approve the action. Senator Bailey refused to return to the capital.

Even without a report, however, the Clark subcommittee has indicated to the CAB that the establishment of an air policy is the prerogative of Congress and not of a Governmental agency. Since it will be well into 1945 before any decisions will be ready anyway, the Senate is expected to act one way or another before the time arrives for the CAB to make a decision on whether one or more carriers should be permitted in the foreign field.

CAB Sets Sept. 18 as Date For Caribbean Hearing

Coincident with the action of the civil Aeronautics Board in announcing the basic draft of this country's international air routes and tentative dates on hearings, Francis W. Brown, Assistant Chief CAB Examiner, has set Sept. 18 for the hearing on applications involving new or amended service in the Latin America-Caribbean area.

The Board, under date of May 18, stopped all procedures with reference to the Latin America-Caribbean proceeding, pending the working out of a policy with reference to postwar expansion in international air transportation.

Brown set July 21 as the date for exchange of exhibits and Aug. 21 for the exchange of rebuttal exhibits.

Aviation Calendar

July 5—Dedication of hangar, Southern Airways, Atlanta, Ga.

July 5—West Coast Aircraft Manufacturers Council division of Aeronautical Chamber of Commerce., Los Angeles.

July 10-12—Hearings, Murray Senate Military Affairs Subcommittee on War Contracts to develop aircraft cutback policies.

July 10-12—American Assn. of Airport Executives, annual meeting, Sherman Hotel, Chicago.

July 17-18—Air Traffic Conference regular meeting, Denver.

July 24-25—Airport Users Conference, sponsored by NAA, Hotel Statler, Washington.

Aug. 1-2—Eastern Division meeting, Airworthiness Requirements Committee, New York; Western Division meeting, Los Angeles.

Aug. 2-3—National Business meeting, National Aeronautics Association, Denver.

Aug. 14-20—North Carolina Wing, Civil Air Patrol, first State Aviation Week and convention of State Aeronautical Commission, Charlotte, N. C.

Sept. 4-6—Annual meeting Aero Medical Association, Hotel Jefferson, St. Louis, Mo.

Oct. 5-7—SAE National Aircraft Engineering and Production meeting and engineering display, Biltmore Hotel, Los Angeles.

Nov. 15-18—Second National Aviation Clinic, Oklahoma City.

Dec. 4-6—SAE National Air Cargo Meeting, Hotel Knickerbocker, Chicago.

Jan. 8-12—1945 SAE Annual Meeting and engineering display, Book-Cadillac Hotel, Detroit.

Senate Clings to Rein on World Air Plan Despite Committee Delay

THE U. S. SENATE will assert itself on postwar international commercial air policy, probably within the next few months, and has no intention of bowing out of the picture, leaving the matter with the executive branch of the Government.

This was explicit in action taken by the aviation subcommittee of the Senate Commerce Committee, headed by Sen. Bennett C. Clark (D., Mo.). In a letter, slated to reach the President, State Dept., and Civil Aeronautics Board this week, the subcommittee directed the Board to take no "definitive action" on foreign route applications until the Congress has laid down its policy for international aviation.

The letter was drafted by Clark, Sen. Josiah Bailey (D., N.C.), and Sen Owen Brewster (R., Me.). It was a reply to a previous letter from the Board, informing the subcommittee of its intention to open hearings on foreign routes. The letter is also understood to acknowledge CAB's authority to hold these hearings under existing law.

All hands now point to the subcommittee pursuing the following course:

1—Filing a report with the Senate, stating its views and recommendations on postwar aviation. The subcommittee has now studied the ramifications of the subject for a period of a year and heard testimony from a broad field of witnesses from airline and shipping companies and the Government.

2—Introduction of legislation. The subcommittee's letter directing the CAB to take no "definitive action" on foreign route applications until Congress has laid down its policy, carries with it the implication that the subcommittee may have new laws governing international air transport on the books by the time CAB is ready to issue certificates. Legislative action does not seem probable until the new Congress assembles next January. It may well be, however, that the subcommittee, after making its initial report, will introduce legislation before year's end and accomplish spadework on it with open hearings.

Unless elections change the picture, the diametrically opposite positions of the Administration and the Senate are evidently slated for a showdown. In brief, the situation appears to be:

The Administration apparently is in support of a program, referred to by President Roosevelt as a policy of "free air"—with limitations, however. The Administration's program is understood to embody: (1) the "right" of transit and technical stop to the planes of as many nations as can be brought in on the plan under an international multilateral agreement; (2) a reproduction of the domestic aviation airline scheme in the international field.

The Senate, on the other hand, appears generally to favor a restrictive policy, referred to by such of its sponsors as Sen. Pat McCarran (D., Nev.) and Sen. Arthur Vandenberg (R., Mich.) as "sovereignty" of the air, and a "chosen instrument." This air policy would give other nations no "rights," under general international agreement, to the airspace of the U. S. and the "privileges" of transit, technical stop and commercial entree would be bargained for under unilateral arrangements.

A majority of the 10 members of the Clark subcommittee favor a strictly interpreted policy of restriction of the air and some form of "chosen instrument."

Following is a list of the 10 Senators with their views:

Sen. Josiah Bailey (D., N. C.), chairman of the full Commerce Committee, is believed to endorse a "chosen instrument." He was in his home state of North Carolina during the fortnight, but in an interview six months ago, this is the position he took.

Sen. Bennett C. Clark (D., Mo.) is expected to continue to "sit on the fence", and play the role of referee rather than of an ardent proponent of a special program. He is expected generally to fall in line with the position taken by the majority on his subcommittee.

Sen. James Mead (D., N. Y.) favors limited "freedom of the air", such as has been endorsed by the Administration, giving the right of transit and technical stop to foreign planes—except, perhaps those of enemy nations—under a multilateral international agreement. He said that some type of "chosen instrument", a federated operation of many airlines united as a single company for overseas transport. are possibilities. He also said a compromise on regional monopolies might be the most efficient method.

Sen. Mon C. Wallgren (D., Wash.) has not formulated his views, having been absent from many of the subcommittee's sessions. He reported that he would read several books of testimony before "making up his mind."

Sen. Pat McCarran (D., Nev.) favors a single "chosen instrument", as is evidenced by the legislation he introduced this Spring. McCarran has said that he would consider a system of regional monopolies as a possible "second choice."

Sen. Arthur Vandenberg (R., Mich.) has publicly advocated a "chosen instrument."

Sen. Owen Brewster (R., Me.) has taken a position in favor of a "chosen instrument." Brewster, who has been one of the most active members of the subcommittee, objected to the plan for reproducing the domestic airline pattern in the foreign field as drawn "simply along geographical lines" and "without recognition of other problems." It is based on the assumption, he declared, that the "world is composed of people of similar goodwill toward our nation." Emphasizing the differing sets of factors prevailing in a world at war where all Allied nations are pulling together and a peacetime world of commercial competition, Brewster discounted the argument that operational success of airlines under Army and Navy contracts is a measuring rod of their success in a commercial economy. "It is a matter of record that all foreign airlines are highly cartelized, not only in Europe, but in operations to the Orient, and that they believe in development along these lines", Brewster said. "It is a world combination that American aviation will be up against."

Sen. Harold H. Burton (R., Ohio) also favors a "chosen instrument."

Sen. Edward V. Robertson (R., Wyo.) favors "sovereignty" of the air, as opposed to the Administration's program for international reciprocal rights of transit and technical stop, but declared that he would not favor holding the U. S. to a single "chosen instrument" for "any length of time." Robertson said he would favor regional monopolies, except in perhaps a very few instances where air traffic will warrant two U. S. instruments on one route.

Sen. Hattie Caraway (D., Ark.) was not available for interview being in her home State where she is up for re-election.

Different Over There

British Aircraft Employes Get $31.25 a Week; Work 54 Hours

Workers in aircraft factories in the United States who think they are underpaid at wages which seem to British workers to be in the realm of fantasy, will be interested in a news story in *The Manchester Guardian* recently about complaints by workers in non-aircraft industries against the "high" wages paid in the aircraft factories.

It seems that local city workers in Manchester earn 82s, 8d per week (about $16.50 at current rate of exchange), jute employes in the textile industry earn 83s, 3d or about $16.75 weekly, while those producing vehicles and aircraft earn 155s, 10d per week, or about $31.25.

The story also revealed that 54 hours is the maximum for the average worker although in general engineering, electrical engineering and marine engineering the weekly total is 58.1 hours.

"It is not immediately obvious why in the fifth year of war men's hours should be so much longer and earnings per hour so much higher in aeroplane making than in the textile industries," commented H. W. Singer, of the economics department of Manchester University.

Test Flier at 50

Will Dougan, 50, who flew with the Canadian Air Force in World War I, has had 600 hours of test flying P-38s. With him is his son, 20, just commissioned a pilot in World War II.

Van Zandt Observes:

'No Nation Has Corner On International Routes'

NO NATION is endowed with a natural monopoly of international airways—alternative routes exist, somewhat less desirable perhaps, but none the less feasible, between all the major trade regions of the world, J. Parker Van Zandt says in "The Geography of World Air Transport" published by The Brookings Institution.

The three most strategic territories lying athwart the network of world airways, he says, are a possession of the United States (Alaska), a dependency of a British Crown Colony (Labrador), and Soviet Eastern Siberia. "They can all be by-passed, however, if inept politics makes it necessary."

The truth is, Van Zandt says, "the economic range of modern transport has eliminated the last 'irreplaceable' airport in the entire Principal Hemisphere. The mischievous notion that nations are in a position to thwart each other by a 'dog-in-the-manger' attitude toward strategic airport sites is another harmful product of the distorted Mercator image in which most people view their world."

Van Zandt blasts numerous popular misconceptions about the future postwar airways:

The North Pole, for example, has no importance. Not one of the major airways will have occasion to go above the Arctic Circle.

Neither will the Pacific Ocean have great importance, for most of this ocean lies in the hemisphere having the least trade, land area and population. The air route to Asia will be by land through Alaska.

Airways will not follow sea lanes.

Great Circle flying is largely a myth—airplanes will follow economic courses principally.

Europe, not North America, is at the hub of the world's regional trade regions and closest to the greater number.

In concise language, Van Zandt describes a new hemisphere which he calls the Principal Hemisphere, in which lie all major land areas except Oceania. The eight major trade regions are North America, Greater Europe, U. S. S. R., Asia, Middle America, South America, Africa and Oceania. Of the eight, the first four dominate the world. Through these will operate most of the major airways of the future.

Mexican Air Head Named

General Alfredo Lazama, who has been director of a military training school at Pueblo, Mexico, has been appointed Director of Civil Aviation of Mexico to succeed General Alberto Salinas Carranza, who resigned.

ATA Closes N. Y. Office

The New York office of the Air Transport Association was closed June 30. It was opened last fall. Col. Charles Hart, who had managed the office for the ATA's Joint National Advertising Committee, resigned to join the Erwin-Wasey advertising firm, which handles the Association account. He will succeed Roger Combs.

Charter Fares Taxable

Some fixed-base operators are reported to have been cited for violations of the Internal Revenue code for failure to pay a 15% tax on charter fares. Some operators were unaware that they were required to charge the transportation tax on charter fares. The person who charters a plane yet sells the transportation service to others must collect and account for the tax with respect to all amounts paid to him for transportation in excess of 35 cents.

Meyers Subs for Branshaw

Maj. Gen. Bennett E. Meyers, deputy assistant chief of the Air Staff in charge of materiel, maintenance, and distribution, has assumed command of the AAF Materiel Command during the absence of Maj. Gen. Charles E. Branshaw, who is on sick leave in Florida, the War Department announces.

Transoceanic Base Under Construction At National Airport

A half-million-dollar transoceanic terminal for the Air Transport Command, which will be used by commercial overseas air lines after the war, will be completed at Washington National Airport late in August.

The terminal includes three buildings—a steel hangar 200 ft. by 200 ft., a passenger and operations building, air freight and mail building—and 50,000 sq. yds. of concrete plane parking space.

Complete facilities for passengers, mail and express for foreign destinations, including customs offices, will be housed in the passenger and operations building. Headquarters of the Army Air Base of National Airport also will be moved there. Hangar No. 6 will be vacated as soon as the new terminal is completed.

The project, which is the first complete such ATC terminal consrtucted in this country, is 600 yards north of the Administration Building.

The steel hangar is a modified version of a type used in war theaters. Maintenance and repair shops also will be housed in the new installation.

Col. Frank H. Collins is in command.

Harvard Maps Plan to Handle Surpluses

Report on Disposal Of Planes and Parts Sent to Congress

Surplus Transports Available for Postwar Use

The minimum and maximum quantities of surplus military transport models needed in immediate postwar commercial uses as estimated in the Harvard report are:

	Twin-Engine Transports 5,000 to 20,000 lbs.		Twin-Engine Transports over 20,000 lbs.		Four-Engine Transports		Total	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
U. S. Carriers (including transoceanic)	95	365	105	400*	140	260	340	1,025
U. S. Corporate and Executive**	195	650	15	50	...	...	210	700
U. S. Contract Cargo Services ***.....	0	75	0	200	0	25	0	300
Foreign Carriers	200	800	150	500	50	200	400	1,500
Foreign Corporate and Individual** ..	90	450	10	25	...	...	100	475
Foreign Contract Cargo Services*** ..	0	300	0	800	0	100	0	1,200
Total	580	2,640	280	1,975	190	585	1,050	5,200

* This maximum estimate is based on the possibility that twin-engine planes might be released a considerable time prior to the release of four-engine equipment. In such a situation the domestic airlines conceivably would satisfy their equipment needs temporarily with surplus twin-engine airplanes of this size

**"Corporate and Executive" includes a substantial proportion of nonmilitary requirements of U. S. Govt. Depts and bureaus. A somewhat similar foreign allowance is under "Foreign Corporate".

***Potential contract cargo operations are not easily predicted and the best that the above figures can therefore be are "intelligent guesses."

A LENGTHY PROPOSED GUIDE for the disposal of surplus aircraft and parts, prepared by the Harvard University Graduate School of Business Administration, has just been turned over to Congress.

The report carrying detailed recommendations on methods of disposal and pricing of planes and parts, which had been long awaited by the aviation industry, was submitted to the Senate War Contract Subcommittee.

The report is along lines designed to maintain the maximum possible technical development in aeronautics, a strong aircraft production industry, a reservoir of skilled personnel, a strong air transport industry, and public support for airpower.

It was prepared by the aviation research staff under the general supervision of Melvin T. Copeland, director of research. Directly concerned, however, were Professors Lynn L. Bollinger and Tom Lilly, aided by Paul F. Lawler, L. LaVerne Horton and R. Baker Young.

Specific policies are recommended for different classes of equipment. These classifications are:

(A) Planes useful only for military purposes.

(B) Larger planes primarily useful for scheduled transport operations.

(C) Smaller planes with nonmilitary uses (adaptable to fixed-base operations, training, personal flying, and a wide variety of miscellaneous uses by government departments and private corporations).

(D) Major components useful for both military and nonmilitary purposes.

(E) All other planes and components (including equipment in unsound condition) not useful for further military or commercial purposes.

The report states that it is impossible to devise specific procedures uniformly applicable to the disposal of all types of surplus planes and components, hence the recommendations are presented for each classification. Summaries follow:

Class A (Combat)

In this class are fighters, two- and four-engine bombers and other tactical aircraft not economically adaptable for commercial flight purposes. The potential supply of surpluses is huge. The only market of any importance is the air forces of friendly foreign nations, but since the surplus will be greater than the probable demand, the report recommends the transfer of remainders to Class E to be used for educational and other ground purposes or to be stripped of components for salvage.

In the absence of an international agreement limiting or prohibiting international sale of combat aircraft, "surplus combat aircraft should be released for foreign sale or 'barter' subject to the approval of a board which includes representatives of the War, Navy and State Departments." The AAF and the State Dept. would each have veto power over any action.

"It is of questionable advantage either to the United States or to foreign nations that we attempt to dispose of these planes for cash, thus encouraging the smaller nations to use up their slender dollar balances to build up armaments. It is important, therefore, that our objectives and plans be determined in advance so that we may be in a position to offer our surplus aircraft in exchange for those bases, landing rights, strategic material, or other considerations which may best fit our national needs . . . Gifts should not be made merely for the sake of being "good neighbors."

Outlet for 1,000

Two well-qualified officials who have excellent technical advice available have concluded that over 1,000 DC-3 transport planes could well be used for rehabilitation in Europe during a three to five year postwar period, the Harvard Business School said in its report on the disposal of surplus aircraft.

Some overhaul of planes sold abroad is desirable in order to protect the reputation of American planes. Sales on a "where is, as is" basis may be necessary, however, to meet competition and to avoid large expenditures for overhaul.

Combat aircraft should be held at foreign bases until agreements on international policies, if any, are concluded.

U. S. combat types which have been subjected to the vagaries of use and maintenance by foreign nations should be unhesitatingly scrapped for their salvage value in components.

Sale of high performance tactical planes for civilian uses should be prohibited in the interest of safety.

Inasmuch as disposal of combat types will probably be in terms of large blocks of planes rather than individual planes, it should be practicable to include with each sale the quantity of spare parts being held in storage for that number of planes.

Class B (Transport)

Planes in this class range in size from 7,500 lbs. gross weight of the Beech UC-45 to the 75,000 lb. and higher gross weight of four-engine transports. In general, for use by scheduled airlines, nonscheduled operations of corporations, fixed-base operators, nonmilitary government divisions, etc.

"The excess supply of surplus transport planes may, after postwar demands are met, be far less than the many thousands now generally anticipated. The attrition rate in wartime military operations is understandably severe. Moreover, many of those remaining will be in such condition as scarcely to warrant rebuilding for commercial use."

The supply of numerous types such as Douglas C-47, and Curtiss C-46 will probably be much greater than the total demand for such planes by all commercial airlines.

Whereas dollar price is at best a secondary consideration, *a uniform price to all buyers* should be the key control device in determining both uses and distribution.

The disposal agency should not have the power to select domestic buyers by decree or the power to grant subsidies in the form of a special price to feederlines, returned servicemen, government users or any other special groups. "Although it may be desirable to subsidize certain developments in aviation, the subsidy should not be determined by regulations regarding surpluses or by the surplus administrator. Without a uniform price policy the attainment of sound legislation and of an efficient administration of surplus disposal is likely to be lost in a confusion of pressure politics."

'Avoid All Schemes!'

All schemes should be avoided (such as wholesale extensions of airline routes) which consider mere disposal as such the major objective.

The surplus administrator should set prices sufficiently low to encourage the 'interim' use of these planes before new models are available. *No attempt should be made to set a price so low that the total supply will necessarily be sold.*

While prices will naturally vary for each model, general guides to pricing policy are:

1. For the bulk of surplus planes which will probably become obsolete in one to five years, the price should be set at a level which permits full amortization during the probable economic life at rates comparable with established airline amortization rates on similar equipment.
2. The price for outright cash purchase should be low enough to permit a reasonable return on the investment when contrasted with the rate charged under

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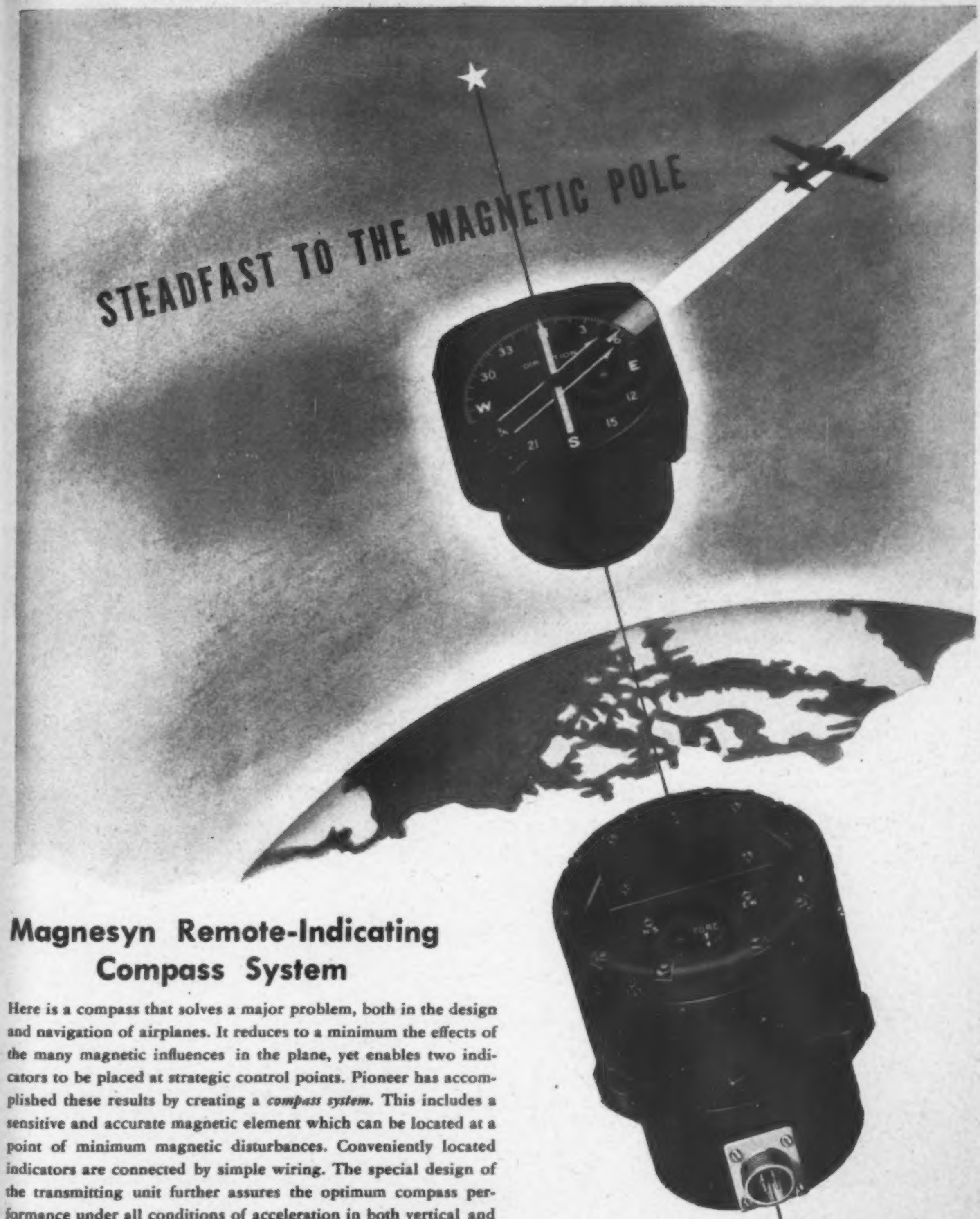
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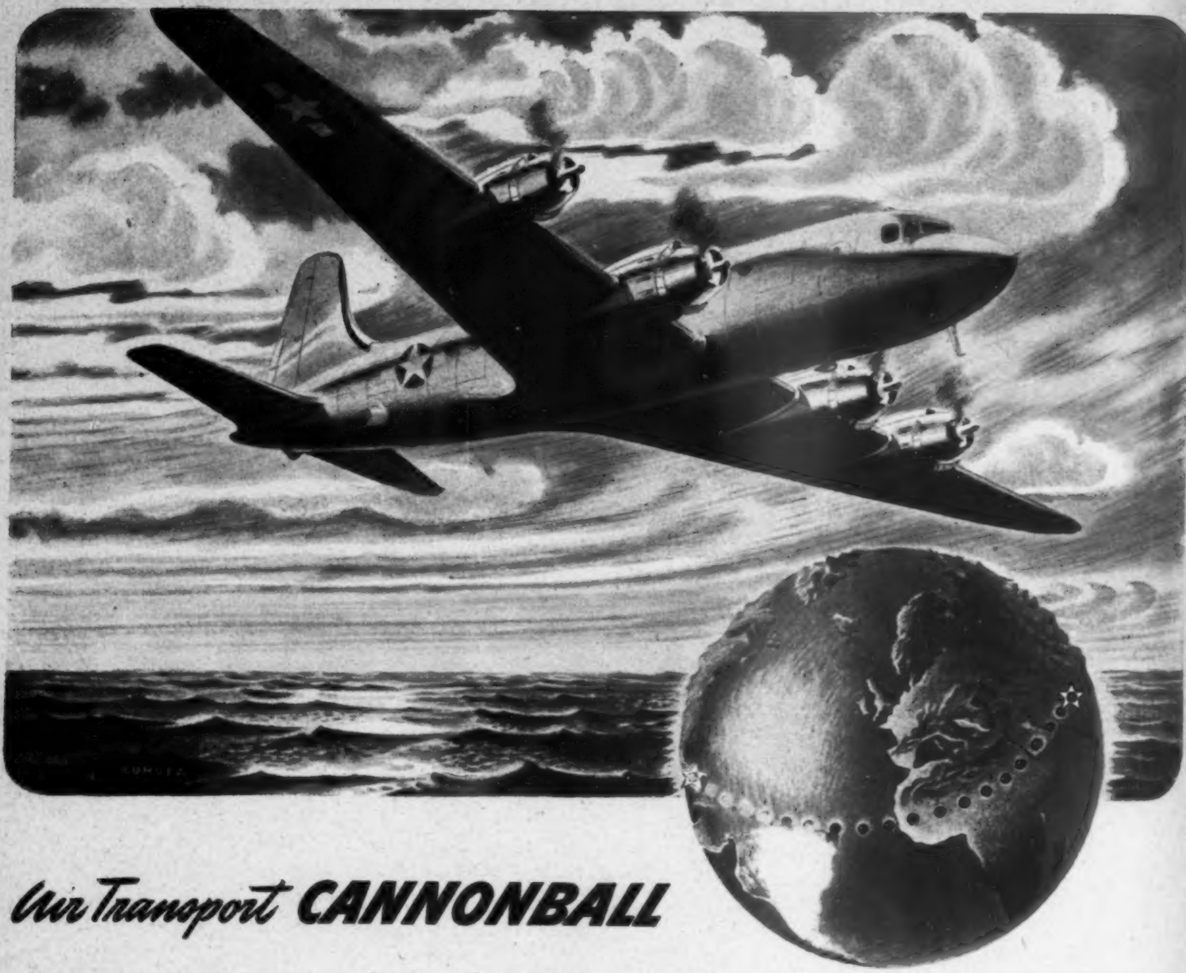

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(Continued from page 24)

either a lease or the terminable-installment plan.

(Both are discussed in detail in the report.) In order to leave purchasing power free for acquisition of newly produced aircraft, the airlines and other users of Class B equipment should be offered, *as an alternative to outright cash purchase, either a lease arrangement or an installment purchase contract subject to termination by the buyer without recourse.*

"To avoid the establishment of a cumbersome temporary government organization to retail planes, when large numbers become surplus, *sales should be made through the manufacturer who originated the design*, acting as agent for the government."

The surplus administrator should determine price and general terms of sale. Foreign sales by manufacturers should be subject to export licenses. From the proceeds, the government should pay the manufacturer for reconditioning or overhauling and the buyer should pay for refurbishing or modification. Cost-plus-fixed-fee contract for this work may be necessary. The Baruch report recommendation of "doing business in a goldfish bowl" should be strictly followed.

"Neither the original manufacturers nor any other party should be permitted to purchase exclusively large blocks of a particular model for speculative resale."

Planes of this class should, in most instances, be overhauled to meet the proper airworthiness standards and modified, when necessary for civil use, by the original design manufacturer.

The original design manufacturer could also best act as agent for the government in inspecting, classifying, and redistributing spare parts for Class B planes.

Specific exception to the uniform price policy may be necessary for sales to foreign countries in the attainment of broader national objectives—otherwise methods of distribution in export market should be as similar as practicable to those applied in the domestic market.

If quantities of surplus transports should remain after all commercial airlines' needs and other domestic and foreign demands are met, there may be justification for selling planes at sharply reduced prices for certain restricted "noncompeting" uses.

During the war the distribution of surplus transport models should follow the procedure recently adopted for the return of airline DC-3's, whereby the CAB allocates planes to air routes most urgently needing them for wartime loads. The CAB should function as claimant for all airlines during the war.

Class C (Smaller Non-military Planes)

Class C planes range in size from 1,200 pounds to 11,000 lbs. gross weight and will be useful for nonmilitary government divisions such as Forest Service, Fish and Wild Life Bureau, etc.; for special commercial activities such as cropdusting and mapping; for corporate flying such as executive travel and pipe line inspection; fixed-base operators; government-sponsored flight training; personal flying; and export.

Included in this group are a few trainer types which have limited adaptability to civilian use.

"A careful inspection of individual planes will probably reveal that in the interests of air safety a large number should be scrapped rather than sold. In order to guide such decisions, the surplus administrator should establish for each model the maximum residual value anticipated for planes in top condition. Then any individual plane that is found to require a greater expenditure than this residual value to restore it to airworthy condition and CAA standards should be relegated to Class E for ground school uses or for salvage."

When Class C planes are ready for sale, they should be concentrated at specified regional locations and offered on a "where it, as is" basis. Factory overhaul and modification should for most small planes be unnecessary. Neither would it be particularly advantageous for such models to be routed through the original manufacturer as sales agent. Civil Air Regulations should suffice to insure proper safety standards. Instead of sealed bids, a simplified auction procedure could be used effectively. There would be an announced minimum price.

Because the widest possible civilian use of surplus Class C planes may stimulate rather than hinder the development of the aircraft industry, minimum prices should be set with a view to obtaining maximum possible distribution consistent with reasonable proceeds for the government.

No lease, installment purchase or other complex financial arrangement should be attempted in this class.

As an exception certain military trainers which can be useful in stimulating civil flight training of a type valuable to the Army should not all be put on the block for the highest bidder but could well be allocated or leased for a nominal sum to approved flight schools.

It is to the national interest to sell at any nominal price above salvage value the remainder of those simpler military trainer types which would otherwise be unused and scrapped.

Foreign bids as well as resale in foreign markets should be allowed subject to the usual export license control.

Because planes of this class deteriorate rapidly unless carefully handled and stored indoors, every effort should be made to affect their sale as rapidly as they become surplus. During the war the same general procedure is applicable.

Airworthy equipment in this class should not be destroyed, however, or allowed to deteriorate in the open merely because war conditions temporarily preclude other than military usage. The governing consideration is the preservation of costly equipment which may have any postwar usefulness of national value; the dollar proceeds to the government will at best be small from this particular class of equipment and should be relegated to secondary consideration.

Class D (Major Components)

In Class D are engines, propellers, instruments and radio equipment in finished form. Not included are combat material such as bomb-sights, machine guns, small components such as electric motors, hydraulic systems, etc.

(Group I)

Large engines (1650 cubic inch displacement or larger). Disposal policies should be similar to Class B airplanes.

"Engines outside the continental U. S. should not be returned to this country unless they have an appreciable residual value; that is, uless the anticipated net sales price of a surplus engine located abroad exceeds the cost of packing, transportation and overhauling."

When practicable, large engines should be inspected and overhauled by the manufacturer who originated the design. The com-

(Turn to page 30)

Types of Planes Listed

Types of surplus planes listed by the Harvard report for the transport and small non-military classifications include:

Class B (Transport)

5,000 to 20,000 lbs. gross weight:
  Beech 18S (UC-45, AT-7, AT-11)
  Lockheed Lodestar (C-56, C-60, AT-18)
  Fairchild AT-21
  Cessna UC-78
Twin-engined, over 20,000 lbs. gross weight:
  Douglas DC-3 (C-47 and C-53)
  Curtiss-Wright Commando (C-46)
  Budd C-93
Four-engined:
  Lockheed Constellation C-69
  Douglas C-54A
  Consolidated-Vultee C-87

Class C (Small Non-military)

Luxury Private Planes:
  Grumman OA-9 and OA-14 (900 hp. and 400 hp. in aggregate)
  Noorduyn UC-64 (550 hp.)
  Beech UC-43, Howard GH-1 and WACO UC-72 (all single engines)
  Consolidated-Vultee AT-19
  Fairchild UC-61
Smaller Private Planes:
  Liaison types—L-2, L-3, L-4, PT-1, PT-14, L-6
  Sturdier liaison types: Stinson L-1 and L-5
  Small trainers: Ryan and Fairchild
Simpler Trainers:
  North American AT-6
  Fleetwing BT-12
  Consolidated Vultee BT-13 and BT-15
  Cessna AT-17
  Waco PT-14
  Stearman PT-17
Limited-Purpose Advanced Trainers:
  Curtiss-Wright AT9
  Beech AT-10
  Fairchild AT-21

CAPA Holds First Meeting in Capital

The U. S. Commission of the Permanent Aeronautical Commission held its first meeting in Washington June 21 to take the first steps toward formulating proposals which will be submitted to member governments preparatory to the adoption of an agenda for the first meeting of the international body. Standing, left to right, William A. H. Burden, assistant secretary of commerce; Arnold W. Knauth, International lawyer; Stephen Latchford, advisor of air law, State Dept.; Theodore P. Wright; Aircraft Production Board; Stokeley W. Morgan, chief, Aviation Division, State Dept.; Dr. Francis W. Reichelderfer, chief, U. S. Weather Bureau; seated, left to right, Louis A. Johnson, former assistant secretary of war; Oswald Ryan, CAB member and chairman of committee; and Congressman Alfred Bulwinklo.

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(Continued from page 27)

pany should then act as agent for the government in selling them.

(Group II)

Large propellers—automatic types for engines of 1650 cubic inch displacement or larger. Disposal policies should be generally similar to those for large engines. The manufacturer who originally designed the propeller is the best equipped to inspect, overhaul and act as sales agent.

(Group III)

Instruments. They will consist almost exclusively of high quality precision equipment of types not ordinarily used on small personal planes or trainers. In general the disposal policies should be similar to those for large engines and propellers. The larger, more complex and expensive instruments should be inspected, overhauled and sold through the original design manufacturer at prices specified by the government.

Some smaller instruments could be inspected and repaired by airlines and others. At least when unused these smaller instruments could be sold without previous inspection by the manufacturer.

(GROUP IV)

Heavy radio equipment. Most of this has been made especially for the Army and is not suitable for commercial uses because of excess weight. There may be appreciable sales abroad among users to whom a lower price may be more important than excess weight. Indications are that the bulk of this class will be transferred to Class E for educational uses.

(Group V)

Small propellers, engines and lighter radio equipment. Engines of less than 1650 cubic inch displacement. Disposal methods similar to Class C airplanes, sold on a bid system.

Class E (Educational and Salvage)

All planes and components determined by survey to be in an unsound condition are immediately placed in this class. All planes in Class E are no longer useful for flight because of either unairworthiness or the lack of civil and military demands. Class E equipment must be determined by a screening process. It can be disposed of through gifts to schools and organizations for educational purposes, or by scrapping and salvaging useful components and materials.

Col. Harding in Charge of Surplus Aircraft

Lt. Col. William B. Harding has been appointed director of the Surplus War Property Administration's Aviation Division by W. L. Clayton, surplus war property administrator.

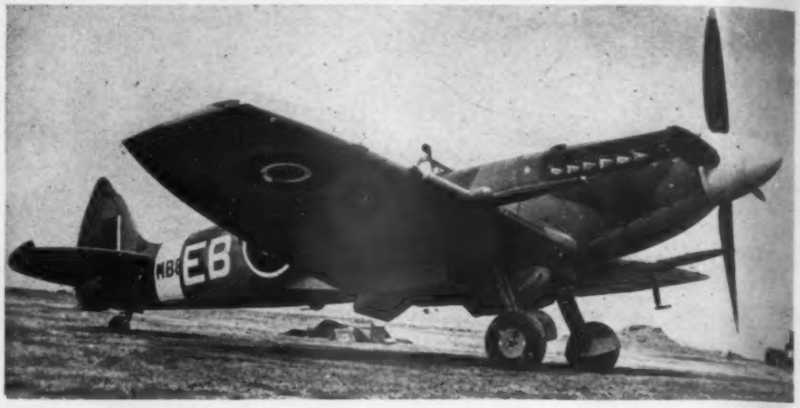
Col. Harding, on military detail from the Army Air Forces, has taken up his new duties in the RFC Building in Washington.

Before entering the Army in July, 1942, Col. Harding was vice-president of the Defense Supplies Corp. Together with William A. M. Burden, now assistant secretary of commerce, Col. Harding directed the Government's program which led to the elimination of Axis ownership and influence in Latin American airlines.

He has long been active in aviation in Wall Street and is a former director of Eastern Air Lines. As a pilot he has flown extensively throughout North and South America. He formerly was chairman of the New Jersey State Aviation Assn. and treasurer of the Seaplane Flying Assn.

He is a member of the Air Research Advisory Committee, Harvard Business School. (Picture on Page 1.)

Spitfire Mark XII Has New Profile



Since being fitted with the Rolls Royce Griffon engine, Britain's Spitfire has a newly-shaped nose. Other new features are the clipped wings, for low altitude fighting, and the new pointed rudder.

Nelson to Give Gas Ration Control to CAA Despite OPA

Quotas to Distributors, Pleasure Flying Ban May be in Effect Sept. 1

THE DELEGATION of authority for control of 73 and 80 octane gasoline by the Civil Aeronautics Authority will be signed by War Production Board Chairman Donald Nelson over the protests of the Office of Price Administration, it is understood. OPA, which formerly held the controls over civilian aviation gasoline, contended that dual control over gasoline would create many conflicts and confusions, hinting that it would frequently result in black market violations.

CAA officials pointed out to Nelson that rationing of aviation gasoline was a technical matter which could be best handled by a technical agency. They also pointed out that there are only 1300 pumps dispensing 73-octane gas and only 8,000 planes involved in its use and that these claimants could be far more efficiently handled by CAA's local and regional offices than by the cumbersome machinery of local OPA rationing boards.

The delegation of authority to be signed by Nelson gives to the Administrator of Civil Aeronautics the exercise of control over "the sale, transfer, delivery or disposition of aviation gasoline (defined as any finished petroleum product having an octane rating of 73 or 80 and used in aircraft or aircraft engines) by any person to any consumer; the use of aviation gasoline by any consumer in aircraft or aircraft engines; and the sale, transfer, delivery or other disposition of aviation gasoline by any person to any person other than a consumer for the purpose of resale, transfer, delivery or other disposition to any consumer for use in any aircraft or aircraft engine." His authority however does not include the power to limit the quantity or use of aviation gasoline by the Armed Forces or in foreign countries.

Nelson's directive confers on CAA Administrator Stanton the power to exercise his authority "upon such conditions and to such extent as he shall deem necessary or appropriate in the public interest, to promote the national defense, and to minimize the unessential use of aviation gasoline."

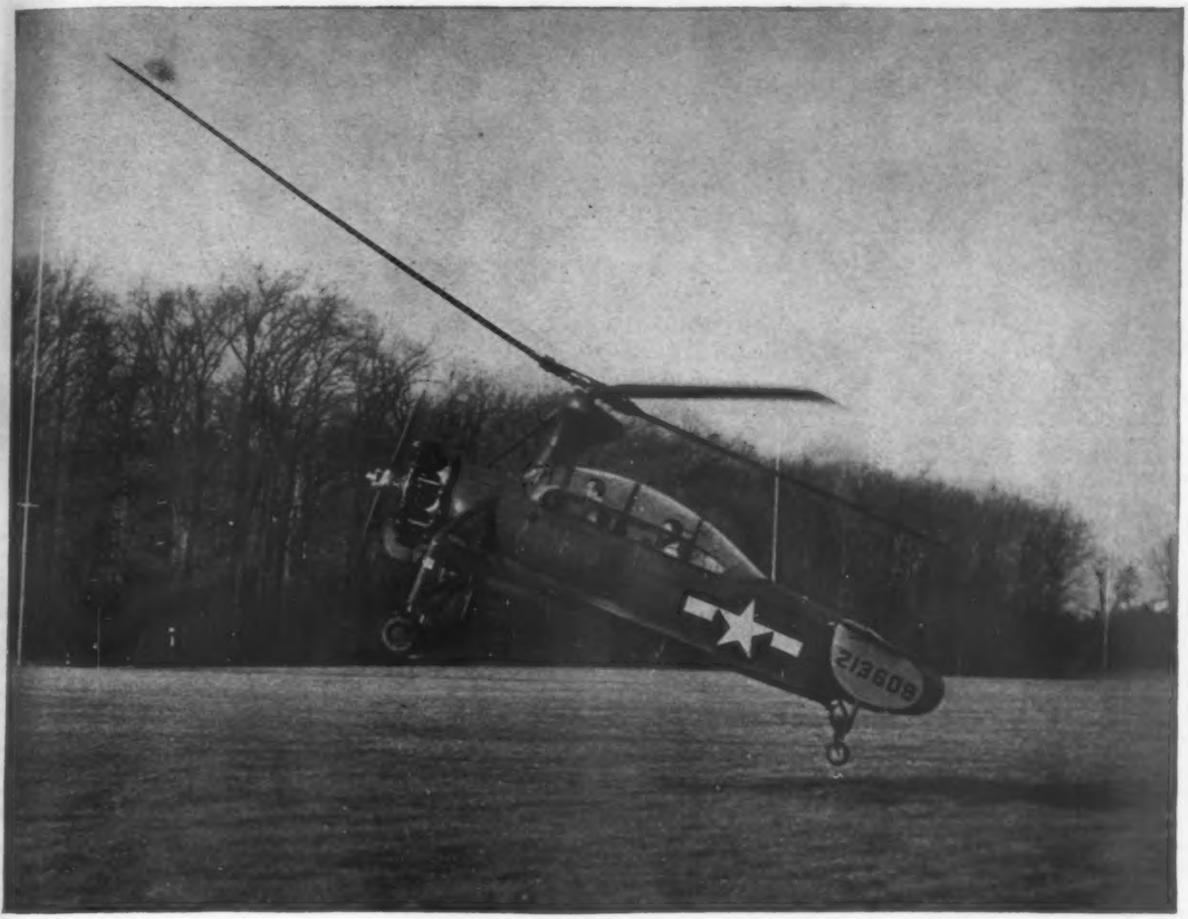
It is understood the controls to be enforced by Stanton will involve the allocation of monthly quotas of aviation gasoline to distributors based on the number of consumers each serves. They will be required to make records of the planes, owners and purpose of the flying for each sale of gasoline, as a basis for his future allotments and for future sales to each aircraft. It is understood the local CAA offices will be charged with the enforcing of prohibitions against pleasure-flying and misuse of allotments of aviation gasoline.

CAA's original plan to have the control system in force by August 1 has been abandoned because of delays in granting the delegation of authority. They now plan to put it in effect by Sept. 1.

Neely Welcomes Forum

Gov. M. M. Neely welcomed 400 delegates to the West Virginia Aviation Forum last week. Speakers were: C. B. Donaldson, director of airports, CAA; John M. Hagan, airport project chairman, Personal Aircraft Committee, Aeronautical Chamber of Commerce; Louis R. Inwood, executive assistant, TWA; John Groves, former manager, Washington National Airport; Leslie Neville, editor, Aviation Magazine; W. L. Jack Nelson, technical assistant to the executive director, CAA-WTS; Lowell H. Swenson, manager, NAA; and Capt. Edgar J. Wynn, Ferry Command pilot, now associate editor of Flying Magazine.

★ NUMBER 8 IN A SERIES, TRACING FIFTEEN YEARS OF KELLETT AIRCRAFT HISTORY ★



Planning for Tomorrow

THE photograph above shows an earlier Kellett development, a military-type autogiro, undergoing tests by the Army Air Forces.

For many years, aeronautical engineers have strived to develop aircraft able to take off or land vertically on any kind of field or flat roof, and to climb handily over usual flight obstructions . . . aircraft that can cruise smoothly at satisfactory speeds, or hover motionless.

During the war, all available materials and manpower are required for military needs. But the growing Kellett engineering staff looks forward to peace, and the opportunity to focus its aeronautical design abilities on helicopter developments for a wide range of contributions to American progress.

Indications are that modern aircraft of the helicopter type will then save time and money in forestry service, ranching, dusting and spraying agricultural crops, patrolling and inspecting cross-country power lines and oil pipe lines, in prospecting—and many more everyday services. Kellett Aircraft Corporation, Upper Darby (Philadelphia), Pennsylvania.

KELLETT

OLDEST ROTARY WING AIRCRAFT MANUFACTURING COMPANY

B-29 Gives New Meaning to Air Power

The Superfortress . . .

WITH the first assault on Japan with B-29 Superfortress, the Army Air Forces unveiled many operating secrets of the plane which is the first to give a hint of the future meaning of the term air power.

The range of the Superfortress is so great, its speed so high, and its bomb load so tremendous that the AAF had to create an entirely new air force to direct its operations.

The Superfortress is a four-engined, mid-wing all-metal monoplane with tricycle landing gear, is half again as large as the B-17 Flying Fortress and "carries the greatest load faster, farther, and higher than any other airplane in existence," according to Boeing Airplane Co.

Its gross weight is probably twice as great as the Fortress and its speed is substantially greater, "comparing favorably with the latest and fastest of the world's pursuit and fighter planes," it is said.

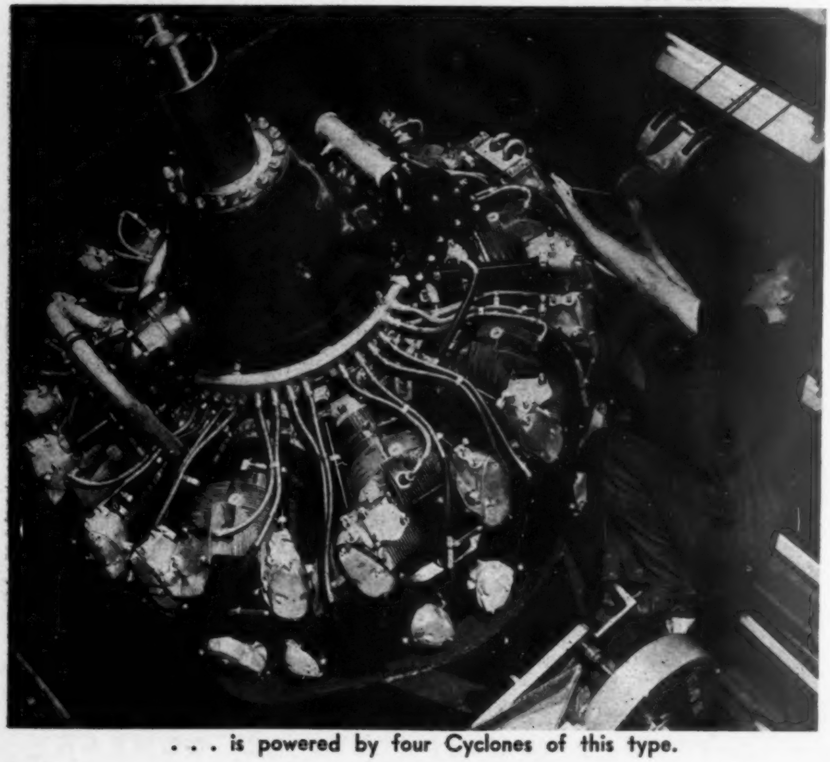
The B-29's wing span is 151.2 ft., length 96 ft. and height 27 ft. In comparison, the B-17 Fortress has a wing span of 103 ft., length of 75 ft. and height of 19 ft.

Power is furnished by four 18 cylinder radial air-cooled Wright Cyclone engines, each rated at 2,200 hp for take-off and 2,000 rated hp, nearly twice the power of the B-17. These engines turn, through reduction gears, the largest propellers in use on airplanes today, Boeing says. They are four-bladed Hamilton Standard propellers with a diameter of 16 ft., six inches.

The reduction gears, said to have the lowest ratio ever used on an airplane, turn the propellers only 35/100 times as fast as the R.P.M. of the engines. Reduction was necessary because it was essential, for aerodynamic reasons, to keep the speed of the propellers' tips below the speed of sound, and yet to utilize the maximum power of the engines. Operating through these gears, the propellers turn slower than those of any other airplane, but the speed of the propeller tips, because of their great diameter, compares with the speed of the tips of propellers on other airplanes, it is said.

Flush-riveted and butt-jointed throughout, the Superfortress, Boeing claims, is aerodynamically the "cleanest" large plane yet designed, incorporating new nacelle design, enclosed turbo-superchargers, flush drains, vents, etc., and high streamlining throughout.

The plane is heavily armed with 50 caliber machine guns and a 20-mm cannon. Power turrets with multiple gun installations are used.



. . . is powered by four Cyclones of this type.

Long and cylindrical in shape, the Superfortress has a completely new wing design—"the most efficient wing ever devised"—known as the Boeing 117. The wing is of web-type construction rather than the tubular spar construction of the B-17. A heavy extruded duraluminum chord was selected for the web spar. Weighing 255 lbs. when machined, the chord is the largest extrusion ever used in a production airplane, Boeing says. As finally developed, the wing has a span of 141.2 feet with an aspect ratio of 11.5, said to be an unusually slender wing. The high aspect ratio, Boeing adds, results in high wing efficiency because a lower percentage of air loss occurs at the wing tips.

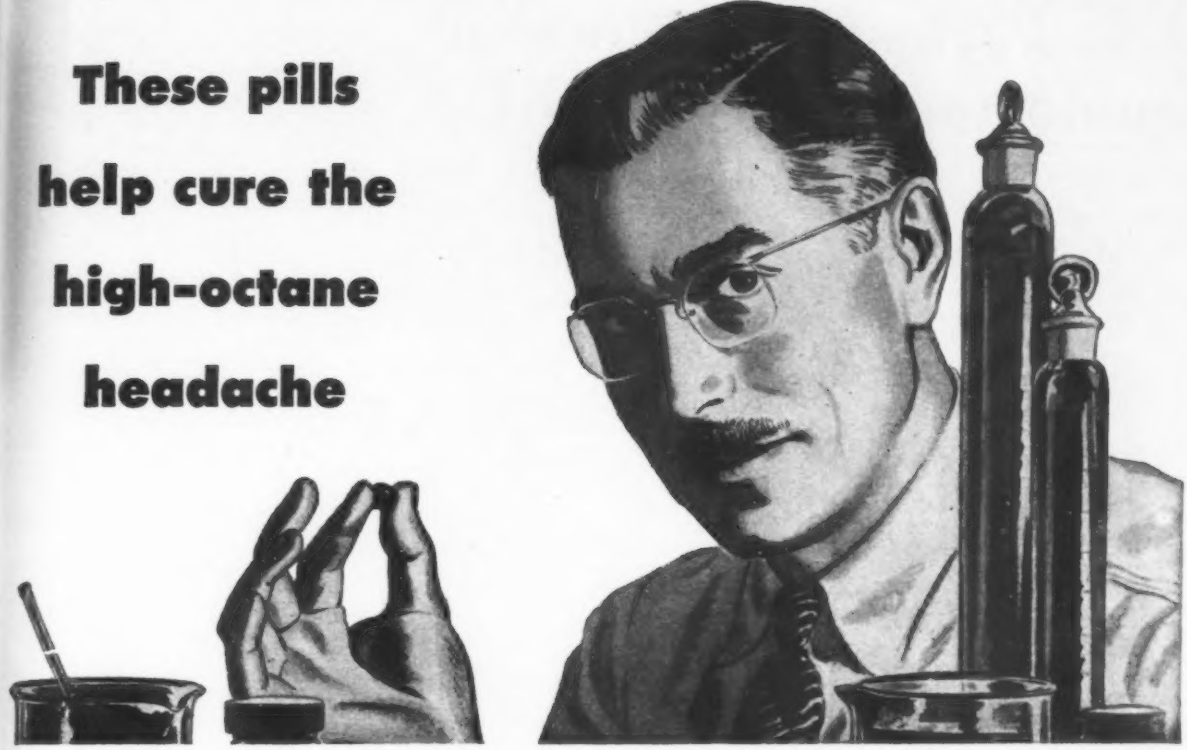
The wing flaps give the Superfortress a landing speed the same as the Fortress. To decrease take-off distance and speed, the flaps are extended 25 degrees at take-off. The flaps roll back and down, increasing the wing area and the downwash angle of the air leaving the wing. When extended, the flaps increase total wing area by 19%.

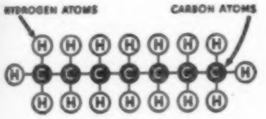
Each engine on the Superfortress has twin, exhaust-driven turbo-superchargers, the installation being necessary because no single supercharger available was large enough for the high-horsepowered engines.

The B-29 is the first military plane with pressurized cabins, with superchargers which maintain near-normal air pressure at high altitudes, the result of experiments

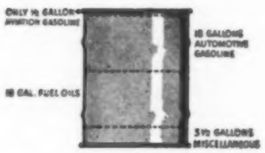
(Turn to page 84)

These pills help cure the high-octane headache




HYDROGEN ATOMS
CARBON ATOMS

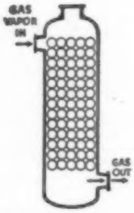
This is a molecule of ordinary gasoline. Like any gasoline it will burn, but this arrangement of atoms causes severe detonation in high-compression aircraft engines.


ONLY ½ GALLON AVIATION GASOLINE
18 GALLONS AUTOMOTIVE GASOLINE
18 GAL. FUEL OILS
3½ GALLONS MISCELLANEOUS

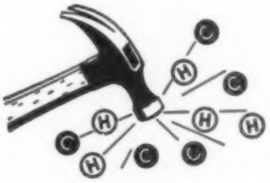
Old-fashioned refining produced some gasoline that *was* good enough for aircraft engines—but only a little, and it wasn't good enough for today's planes.

The more plentiful ordinary gasoline *can* be turned into high-octane aviation fuel if its hydrogen and carbon atoms are rearranged to form a different kind of molecule.

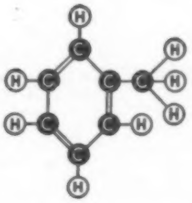
The new catalyst developed by Standard of California does the trick. A catalyst *causes* a change in gasoline but does not actually enter into the new product.


GAS VAPOR IN
GAS OUT

Here is how it is used: Ordinary gasoline, vaporized, goes into a chamber filled with millions of these little catalyst pills. When the vapor touches the catalyst—



its molecules are split open and the atoms arranged in a new pattern. Our scientists devoted years of research to finding the catalyst that would accomplish this best.



This is how the molecule looks after it has been reformed by the catalyst. Standard scientists have made it non-detonating. It is now safe for aircraft engines.

Now, when every pint of aviation fuel is precious, we're making thousands of additional barrels—thanks to another triumph of Standard aviation research.

STANDARD OF CALIFORNIA

O. L. Parks Offers Postwar Employment Program to U.S.

Details of Big Airport Construction Plan Laid Before Secretary Jones

CONSTRUCTION OF THOUSANDS of airports providing employment for millions of wartime industrial workers and returning servicemen in the immediate postwar years is proposed in a plan laid before Secretary of Commerce Jesse Jones by Oliver L. Parks, president of Parks Air College, East St. Louis.

Parks

The program calling for Federal aid would provide:

- ● "Several thousand" airports, concentrated largely in heavily populated areas, rather than in outlying districts. *("St. Louis needs 50 and Illinois upwards of 300," according to Parks.)*
- ● Construction of an average of 450 individual "garage-type" hangars at each airport, both above and underground.
- ● Maintenance of complete service and overhaul facilities at each airport.
- ● A concentrated private-plane sales program, combined with instruction, with a stall-proof, spin-proof, two-control plane the "only plane to be used." *("Helicopters will come, but they are out for the present," Parks says.)*

Parks, who a few months ago filed with the Civil Aeronautics Board application for a network of feeder-pickup routes serving virtually every town of more than 4,000 population in a 600-square-mile area extending from Minneapolis to Dallas, is enthused over postwar feeder possibilities. Currently, however, he is concerned with the fact that hundreds of wartime contracts will terminate when the war ends —"or sooner."

"I know! I just lost five Army contracts," he says.

Parks came to Washington to confer with Jones as the nation's No. 1 lender. Although no longer chairman of the board of the Reconstruction Finance Corporation, the Secretary is, however, head of the department under which RFC functions, and his approval of a plan, such as outlined by Parks, would carry weight in the event the plan is brought up in Congress. Parks anticipates considerable Congressional discussion of his plan because of its political implications.

Parks wants the RFC to loan the money required to buy thousands of airport sites; to clear them off, in the event of a slum clearance project; and drain, surface, and landscape them.

After the land is made ready, Parks expects municipalities or fixed-base operators to take over. They must build the individual hangars, each costing between $800 and $1,200, "but which would be expected to be self-sustaining at rentals of about $17 per month." They must provide repair and overhaul facilities, and, of prime importance, in Parks' opinion, set up a sales-instruction program.

He envisions 50 airports, which he prefers to call "airparks," in the St. Louis area. He bases this number on the report of a research analyst, hired by him, that there is an immediate postwar market in the area for more than 18,000 planes. On the strength of this he already is planning on four airparks in St. Louis, one of them three blocks from the Statler Hotel.

Parks predicts that of 450 planes in each airpark, 300 will "leave for work" somewhere between 7 and 9 a.m., returning between 4 and 6 p.m. He stresses the need for "selling" the public on airplanes for business rather than pleasure, and his surveys show that men and women in the $100-a-week bracket, and above, will make up the postwar market.

Parks backs up his arguments with experience. He already is operating fixed-bases in five cities—Kansas City, St. Louis, Indianapolis, Chicago and Tuscaloosa, Ala. To establish these bases, he either leased space on existing airports or purchased his own sites. The former plan helped him get started quicker without the delays of zoning arguments.

He has orders for 15 Ercoupes. He has taught 109 men and women between 20 and 60 to solo with an average of five hours instruction, some of them at his Kansas City base, which has been in operation only since the Army cancelled its contract with his primary training school at Jackson, Miss., in February. Instead of discharging his Jackson staff, he moved it to Kansas City to open the new base.

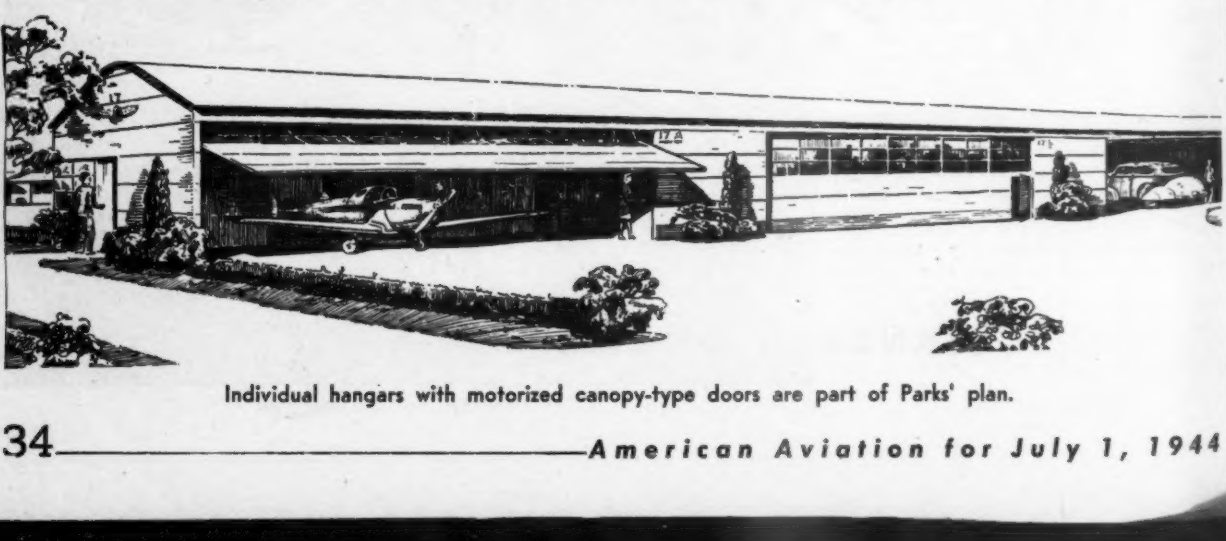
When the staff arrived in Kansas City, Parks informed each—one pilot, one mechanic, two flight instructors, and an office secretary—that the word "sales" was being tacked to each of their job designations. Each was given a course in salesmanship, now a required course for every man and woman in the Parks organization.

Parks, who claims to have sold more Chevrolets in 1927 than any man in the United States, is determined to apply auto merchandising techniques to plane sales. He expects the plane industry to do in three years what it took the auto industry 20 to do, "provided the Government gives us the airports—just the surface, mind you—like it gave roads to the auto."

Of the four airport projects he is scheduling in St. Louis, one in the immediate downtown area, near Delmar and Twelfth Sts., will cost $2,225,000. Landing strips will be between 1,600 and 2,000 ft. long, and one city block wide. The first 50 ft. around the outside will be planted in trees and grass; the next 25 ft. will be a paved taxi strip; then 25 ft. of grass; then 150 ft. paved landing strip; then 25 ft. of grass; a 25 ft. taxi strip; and 50 ft. of trees and grass on the outside again.

The two landing strips are connected by an underpass wide enough for a plane to taxi through, going under an important thoroughfare. The two ends of the runways that are closest together, and are connected by this underpass, will have underground hangar facilities under the runways, 200 ft. wide by 800 ft., so that, all together, hangar space of 1,600 x 200 ft. will be provided, with appropriate taxi aisles and parking space accommodations for approximately 400 airplanes.

Parks also has under way an elevated landing deck, to be built 60 ft. above the railroad yards between 18th and 14th Sts., and between Chouteau and Clark Aves. in St. Louis. Runways are 200 x 1,600 ft. There is a lower deck large enough to house 450 medium-sized planes, with a taxi aisle-way down the center 70 ft. wide. There is a ramp at the end of each runway for the landing ships to get out of the way and go down to storage. There is a woven steel fence as a guard



Individual hangars with motorized canopy-type doors are part of Parks' plan.

NG DISPATCH
DRUGS
EA
AIR EXPRESS

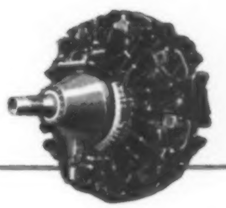
Old Sykes has a new truck on order

Air commerce begins and ends on the ground . . . and its roots already reach deep into many a small American community.

Even the local expressman has become aware of Main Street's stake in air commerce, and of its growing importance to him as an individual. For the *rate of increase* in air cargo to and from *off-airline* points is outstripping even the phenomenal growth of cargo between airline cities.

This trend should encourage feeder line planners and forward-looking communities. Less than 300 American cities enjoy direct air service today — 1,700 others of 5,000 or more population are candidates for the air map of tomorrow. Such service is one of the next big steps toward providing the full load which is air transport's real pay load.

In this development, Wright Cyclones will make their own contribution to operating revenue by their economy of fuel consumption and maintenance. And because they weigh less than comparable power plants they will provide an additional payload bonus. *Wright Cyclones pay their way.*



Cyclones Save 3 Ways

LESS WEIGHT—MORE PAYLOAD
LOWER FUEL CONSUMPTION
REDUCED MAINTENANCE

WRIGHT
Aircraft Engines

WRIGHT POWERS THE TONNAGE OF THE AIR

"One Pound Saved Can Earn $180.00 a Year"

NC25627
NC 25627
CHICAGO & SOUTHERN
C&S

SAYS BRUCE E. BRAUN
Vice President, Operations
Chicago and Southern Air Lines

"In carrying a 200-lb. passenger on a round-trip schedule from Chicago to New Orleans, the revenue to us would be $93.28. Translated into per pound revenue, this is approximately $.50. If we save one pound each day throughout the year, the saving would amount to $180.00. We are very much interested in the postwar use of Boots Self-Locking Nuts. Through their application on Chicago and Southern planes we will be able to capitalize their pronounced weight-saving characteristics."

Send for Free Boots Weight-Saving Booklet Today—Actual weights of over 250 different self-locking nuts used in aircraft, comprehensively reviewed for the convenience of aircraft designers, engineers, operating and maintenance personnel. Copy will be sent you, free, on request.

Boots Steel Anchor Nut

(W25 #8-32) This all-metal, self-locking nut is 60% lighter than a comparable fibre nut.

UP TO 60 LBS. PER PLANE SAVED BY BOOTS NUTS

- Being *all* metal, they are TOUGHER and SAFER.
- Can be used over and over again.
- "Outlast the plane."
- Now standard fastenings on *every* type of military aircraft.
- Will be standard on commercial planes after victory.
- Approved by all government aviation agencies.

BOOTS SELF-LOCKING NUTS

"They Fly With Their Boots On—Lighter"

Boots Aircraft Nut Corporation, General Offices, New Canaan, Conn., Dept. G

rail around the outside, something like on a big river bridge.

The proposed Jefferson Memorial Riverfront Park airport development in St. Louis also is fathered by Parks, and blueprints have been completed for a suburban airpark, to be built on 100 acres with 450 individual hangars above the ground.

The Parks sales technique, as explained to Secretary Jones and Assistant Secretary of Commerce William A. M. Burden, involves a concentrated drive on men over 40 who are heads of families. If the man can't be "sold," the salesman tries to "sell" his wife, son, or daughter.

One of his best arguments is to reveal the results of his recent drive to teach as many classes of persons as possible how to fly, the drive that resulted in 109 persons, men and women, taking over the controls alone in an average of five hours instruction.

This drive was conducted among stenographers, salesmen, cooks, policemen, and mechanics. The amount of time required before solo for the various age groups follows:

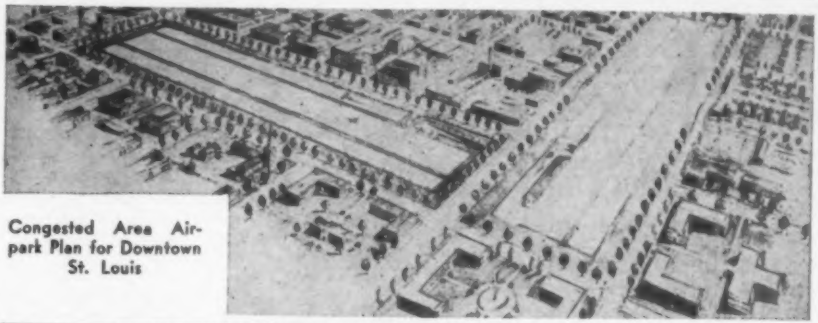
20 to 25 yrs.—4 hrs., 18 min.
25 to 30 yrs.—4 hrs., 44 min.
30 to 35 yrs.—4 hrs., 58 min.
35 to 40 yrs.—4 hrs., 19 min.
40 to 50 yrs.—5 hrs., 3 min.
50 to 60 yrs.—6 hrs., 30 min.

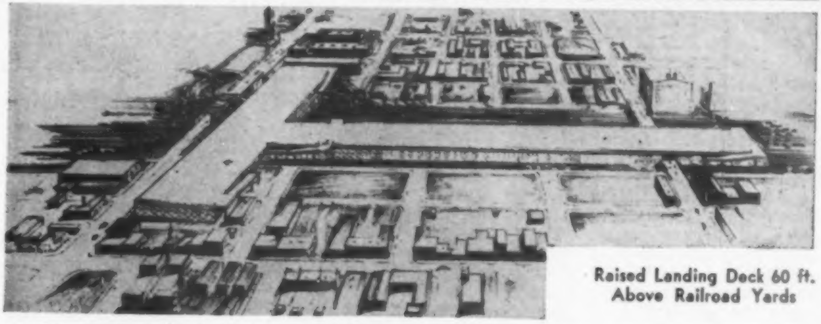
It required an average of 4 hrs., 54 min. to solo women students and an average of 4 hrs., 30 min. to solo men. He also revealed that in teaching the 109 fledglings to fly, these records were kept:

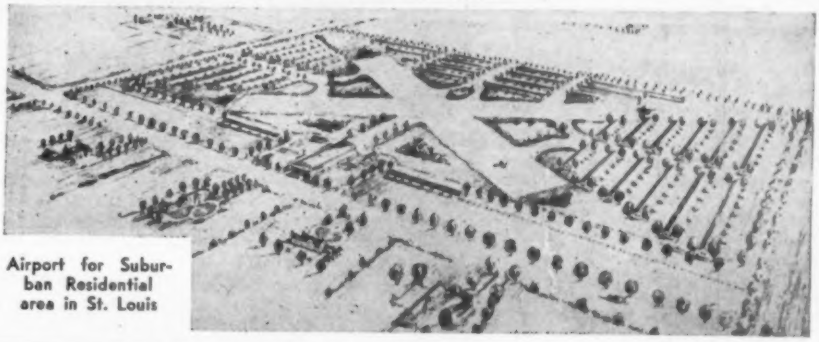
Hours flown	1,133
Gasoline	4,916 gal. at 21c
Oil	214 qts. at 30c
Materials for maintenance	$243.41
Labor required	$1,117 at $2 per hr.
Cost per hour—	
Gasoline	.91
Oil	.05
Material	.21
Labor	.98
Total	$2.15
Cost per mile	.02

"The direct cost is less than that on the average small auto," Parks said.

Airport Developments Proposed in St. Louis


Congested Area Airpark Plan for Downtown St. Louis


Raised Landing Deck 60 ft. Above Railroad Yards


Airport for Suburban Residential area in St. Louis

41 Airport Projects Given FDR Approval

Based on the results of a new survey of projects in the National Defense landing Area program, President Roosevelt last fortnight approved the construction of 14 airports as being required for specific military purposes and 27 others for emergency use.

Approval was given by the President in a communication sent to Secretary of Commerce Jesse Jones. The construction program had been stopped two months earlier on a directive from the President calling for re-survey and redetermination based on military necessities.

The 14 projects reported by the Army and Navy as being required for specific military purposes are: Evergreen, Ala., Winslow, Ariz., Oakland, Cal., Pensacola, Fla., Gainesville, Ga., Trenton, N. J. Pauls Valley, Okla., Port Orford, Ore., Kingstree, S. C., Knoxville, Tenn., Buffalo, N. Y., Champaign, Ill., Niagara Falls, N. Y. and Sheridan, Wyo.

The 27 other airport projects originally recommended by the Army for inclusion in the program and for which specific military assignment cannot be determined now are, however, necessary for emergency use and it is anticipated will prove more so with the continuing growth of military flying of all types.

In most cases, municipalities sponsoring these projects already have entered into purchase contracts and have made other commitments in cooperation with the National Defense Landing Area Program. Little if any critical material is required for the construction of these 27 projects and the machinery and equipment is adequate, CAA officials stated. The list includes: Alturas, Cal., Winter Haven, Fla., Decatur, Ill., Quincy, Ill., Springfield, Ill., Dubuque, Ia., Walterloo, Ia., Lawrence, Mass., Pellston, Mich, Bemidji, Minn., Duluth, Minn., Springfield, Mo., Dansville, N. Y., Greenboro, N. C.. Jamestown, N. D., Canton, O., Mansfield, O., Springfield, O., Wilkes-Barre, Pa., Denton, Tex., Georgetown, Tex., Danville, Va., Martinsburg, W. Va., Parkersburg, W. Va., Wheeling, W. Va., Wiley Ford, W. Va., (Cumberland, Maryland Municipal Airport) and LaCrosse, Wis.

CAB Counsel Hits Colorado PUC Plan

George C. Neal, general counsel for the Civil Aeronautics Board, has filed with the Colorado Public Utilities Commission a statement asserting that Colorado's proposal to adopt rules and regulations involving interstate air carriers represents a duplication of requirements with no benefit to the public.

Neal attended the Denver hearing May 23 and discussed the duplication and confusion that would result if Colorado adopted the proposed rules and regulations. In his statement, he said that the proposed rules and regulations will operate to increase the cost to the public of air service because of additional expenses imposed upon interstate carriers in qualifying under the proposed rules.

"From the viewpoint of the national public interest in air transportation this phase of the problem is not simply one of the impositions of these régulations by the State of Colorado," Neal wrote the Commission. "If other states follow a similar course, the plight of the interstate carrier will be a serious one."

Report from England

British Ship Firms Pressing Claim to Share in Airlines

Problems of Obtaining Permits, Personnel, and Planes Face Industry

By James Stanton

LONDON—When food was not as plentiful in Britain as it is today, a current joke was a remark made by a wife to her husband that "if we had some bacon we'd have bacon and eggs for breakfast, if we had some eggs."

That seems to fit in with the present position of the British steamship companies who want to operate oversea air routes. If they had permits to operate the airlines, they could operate them, if they had some planes. In the recent debate on air transport in the House of Lords, the Lord Privy Seal suggested that the steamship companies submit their plans for air services. This was carried a stage further in the House of Commons recently, when a member asked the Secretary of State for Foreign Affairs if he would assist steamship companies to obtain the necessary facilities for operating air services between this country and South America.

This question brought the reply from Mr. Eden that as such concerns do not yet possess the necessary aircraft and personnel, it would not now be a practical proposition to ask a foreign Government to grant the desired facilities to any particular company.

The Foreign Secretary added, however, that he was taking steps to intimate to South American governments that "His Majesty's Government trust that they will not make any exclusive arrangements that might debar British concerns from operating air services to their countries after the war."

Defy Discouragement

This does not mean that the big steamship companies are discouraged. They are going ahead with their plans to have a share in air transport after the war and they will use every means at their disposal to press their aims. They are not even discouraged by the apparent aims of Britain's present chosen instrument to remain the chosen instrument. Its chairman and director-general spoke to a group of members of Parliament at a private meeting recently. The director-general made it clear that his organization would be able to handle all the oversea air routes from Britain after the war. All he needed, he said, was 300 airplanes; 50 of these could take all the traffic presented on the Paris run, he said. A fleet of 3,000 could handle all the world's post-war air traffic, he added.

He spoke in high terms of the flying crews of his organization but intimated that the ground staffs could be improved. He did not forecast the number of flying and technical staff likely to be persuaded to go over to the steamship and railway companies' air services. They have already got the services of two of his former officials, Major Mayo as technical adviser to the steamship group while Denis Handover, Britain's leading air traffic expert, is air adviser to the railway companies. More switches are expected.

A similar difficulty regarding the supply of aircraft exists for the internal airlines. The Secretary of State for Air has said in the House of Commons that "when the war is over, our resources in aircraft will be allocated in the best way fitted to promote the interests of the country. No shortage of men and women seeking employment in air transport services is anticipated." To a further question he replied that he saw no reason why independent operators, in peace time, should not be able to purchase American aircraft.

This brought the question: "Does that mean that there is to be no monopoly for B.O.A.C. having personnel and aircraft over other operators?" And Sir Archibald Sinclair answered: "No, sir. It means nothing of the kind."

Independents Not Satisfied

The independent operators are far from satisfied. Since the war began, the majority of them, their aircraft commandeered, have been doing maintenance and repair work for the Ministry of Aircraft Production. They are anxious to resume airline operation as soon as possible but every request they make is met with the answer that there are no aircraft available.

It looks now as though the independents will link up with the railway air services and the 40 British steamship companies operating to European Continental ports. One big organization formed—may be formed. It would consist of the railway air group, the Continental steamship companies, both regular lines and tramps, and the independent airlines. The three combined would run the regular airlines between the United Kingdom and Europe, the internal airlines in the British Isles and the taxi and charter services both internal and between Britain and the Continent. One great advantage of this setup would be that the independent airlines would be able to do the maintenance and repair work for the entire organization. Another advantage would be that it would have the support of the private enterprise apostles of this country—the Federation of British Industries and the Chambers of Commerce.

This combination would provide a tremendous amount of capital and it would give the independent airline operators strong support for their plan to resume operations. The railways and shipowners would reap the benefits of people who know something about the operation of airlines.

Meanwhile the important question of an international conference continues in the talkie-talkie stage. There were some questions on the matter in the House of Commons recently. The Secretary of State for Air admitted that no definite arrangements had yet been made for an international conference although it was hoped to hold one later in the year. One Member asked the Minister if he could give assurance that Lord Beaverbrook "had not already sold the pass." The answer was that Lord Beaverbrook had defended the interests of Britain in the conferences he had held and that it was the Government's intention to do so in the future.

Scandinavians Active

How different, say Britain's aviation enthusiasts, is Britain's attitude toward the question from that of the Scandinavian countries. There are reports here that the national companies of Norway, Denmark and Sweden—D.N.L., D.D.L. and S.I.L.A.—have recently implemented a proposal made before the war and have formed a joint company, with a capital of about $50,000,000, to operate a North Atlantic service. It would be in pool with a company to be chosen by C.A.B. and would be daily each way. Already, Douglas DC-4's bought by S.I.L.A. are assured to start operation of the service.

Problematic in the air transport picture after the war is the position of the aircraft manufacturers. Sir Frederick Handley-Page speaking at the recent conference of international air traffic operators in London, gave a hint of the manufacturers' feelings.

He said: "As far as I can see, the aircraft constructor may be in a rather raw kind of deal after the war. We have had what in normal times would be called a boom. We have all been manufacturing to an extent that nobody would ever have dreamed possible. But at one fell moment, our only customers, the Government, are going to say to us: 'We don't want any more of your aircraft.' It is a very desirable state of affairs to reach, but somewhat of a paradox that we who have done our best to supply the means

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Unorthodox Plane Made In England Looks Like It Is Going Backwards

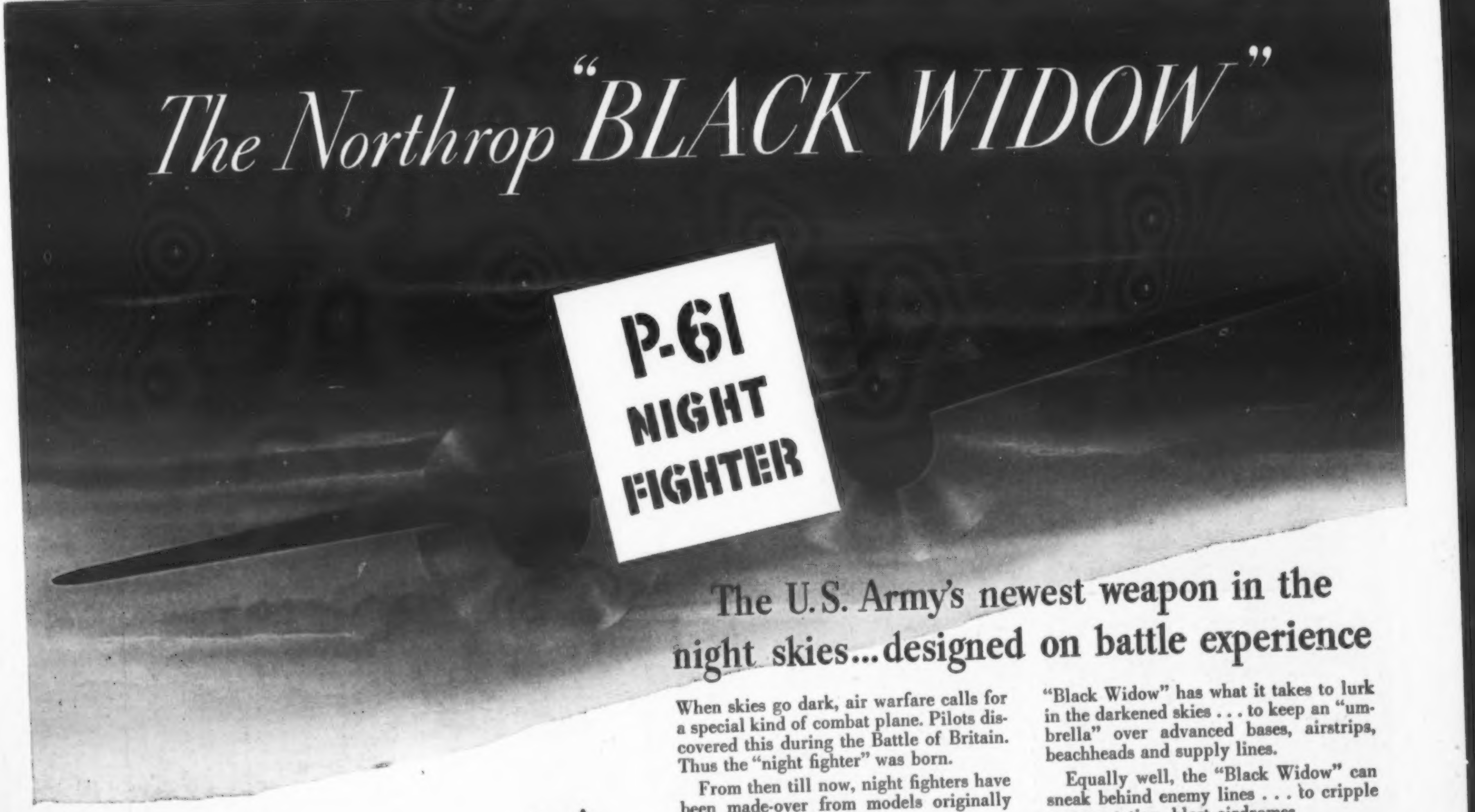
A strange looking plane which appears to be flying backwards has completed satisfactory tests in England.

The tandem Miles 35 is unorthodox in that the tail-plane has far bigger wings than the "main" plane in front. A pusher propeller is used with the engine mounted in the tail of the craft.

Which way is it going?

The model, intended to be a shipborne fighter, was designed by George Miles, chief designer of Miles Aircraft, Ltd., and is described as giving the pilot the best unobstructed view of any plane in existence.

Plans for making a six-engine bomber are being attempted on the same lines as the Miles 35.



The Northrop "BLACK WIDOW"

The U.S. Army's newest weapon in the night skies...designed on battle experience

When skies go dark, air warfare calls for a special kind of combat plane. Pilots discovered this during the Battle of Britain. Thus the "night fighter" was born.

From then till now, night fighters have been made-over from models originally planned for other uses.

The Northrop "Black Widow"— built on knowledge hard-won in four years of night combat—is the first airplane created especially for night fighting.

Big, venomous, secretly-equipped, the "Black Widow" has what it takes to lurk in the darkened skies . . . to keep an "umbrella" over advanced bases, airstrips, beachheads and supply lines.

Equally well, the "Black Widow" can sneak behind enemy lines . . . to cripple transportation, blast airdromes.

For such tasks the P-61 "Black Widow" night fighter has speed to spare. It can also throttle way down, almost hover in the dark. It can land slowly. And it packs terrific fire-power.

NORTHROP AIRCRAFT, INC.
NORTHROP FIELD, HAWTHORNE, CALIFORNIA
MEMBER AIRCRAFT WAR PRODUCTION COUNCIL, INC.

by which victory could be achieved, have by the very means of supplying them stopped our future business."

It is encouraging therefore, to see the manufacturers, like Sir Frederick, taking an interest in post-war air transport. L. G. Frise, chief designer of Bristol Aeroplane Co., who has the Blenheim, Beaufort and Beaufighter to his credit, spoke on the B.B.C.'s home service. *He claimed that most of the air transports being used in war are actually civil types and that with little change they will be the civil types after the war.*

Two New Types Coming

But in addition, Frise continued, two fresh types will emerge to complete all the needs of peace-time flying. One will be the mainliner that can fly 3,000 or 4,000 miles between centers of poulation and commerce and the other will be the owner-driver's helicopter, to tie up all the loose ends of our journeys.

With a range of 5,000 miles, an airliner could be offered, cruising at 250 miles an hour at 20,000 feet with sleeping berths for 50 passengers and accommodation for their luggage and two tons of mail. This would be about three times as big as the heavy bombers now being operated.

"Don't be misled by pretty pictures of spacious interiors and great luxury and promises of jet-propelled flying wings going at 400 miles an hour seven miles above the earth," Frise warned.

All these things will come one day and they will be the result of many years of research but to get started, he thought that there was an intermediate solution containing all the forward steps that ingenuity and experience could muster—this 50-passenger plane for instance, but it would occupy several hundred experienced designers, mathematicians, draftsmen and research workers for perhaps three years producing the 25,000 drawings and several hundred-weights of necessary blueprints.

Flying Wing?

And when in operation, this aircraft must carry, for a journey, say from London to New York, a third of its total weight in fuel. The 50 passengers, their luggage and the mail would weigh seven tons—which would be the payload. Less petrol must be used. This could be done by Diesel engines and in high flying, where resistance is less, gas turbines hold out much promise. Best of all is superstreamlining, which leads to the flying wing.

Regarding materials used in aircraft construction, Frise said that "aluminum alloys lead the field; don't expect too much from plastics in the large plane," he warned.

As for the power plant, he believed that the gas turbine would begin to replace the piston engine when much larger power units are required—such as of 10,000 horsepower each. A piston engine would consist of too many cylinders.

Air Death Claims Are Few

Equitable Life Assurance Co. reports that during a four-year period during which air travel was treated on the same basis as any other form of transportation, only 22 claims were incurred under policies on fare-paying airplane passengers out of a total of more than 61,000 death claims paid.

Leading Figures at London Air Conference

U.S.A
U.S.A.
PLEASE DO
REPLACE
ON SH

Photos just arrived from England show personalities at the Conference of International Air Traffic Operators held in London in May. Top: U. S. observers, left to right, Milo Campbell, TWA, Washington; Lestrade Brown, American Export European director; and Robert Good of American Export, London. Right center, Walter Kronkite, formerly of Braniff, now United Press aviation editor in London, with Major Samarin, of the Aerofloat airline system of Russia. Above, Sir Frederick Handley Page, pioneer aircraft manufacturer of Britain, talking with Air Vice-Marshal Janousek, of Ceskoslovenska Statni Aerolinie (Czechoslovakian State Airline). At right, Lord Brabazon, standing, veteran leader in British air affairs, and Lord Grimthorpe, conference chairman. Inset, Fred C. R. Jacques, managing director of North Eastern Airways of Britain, conference organizer.

Southern California's First New Lightplane Since 1941 Test-Flown by Hockaday Firm

The Hockaday Comet, first private plane to be constructed and flown in Southern California since Pearl Harbor, was given test flights last week at the Compton, Cal. airport.

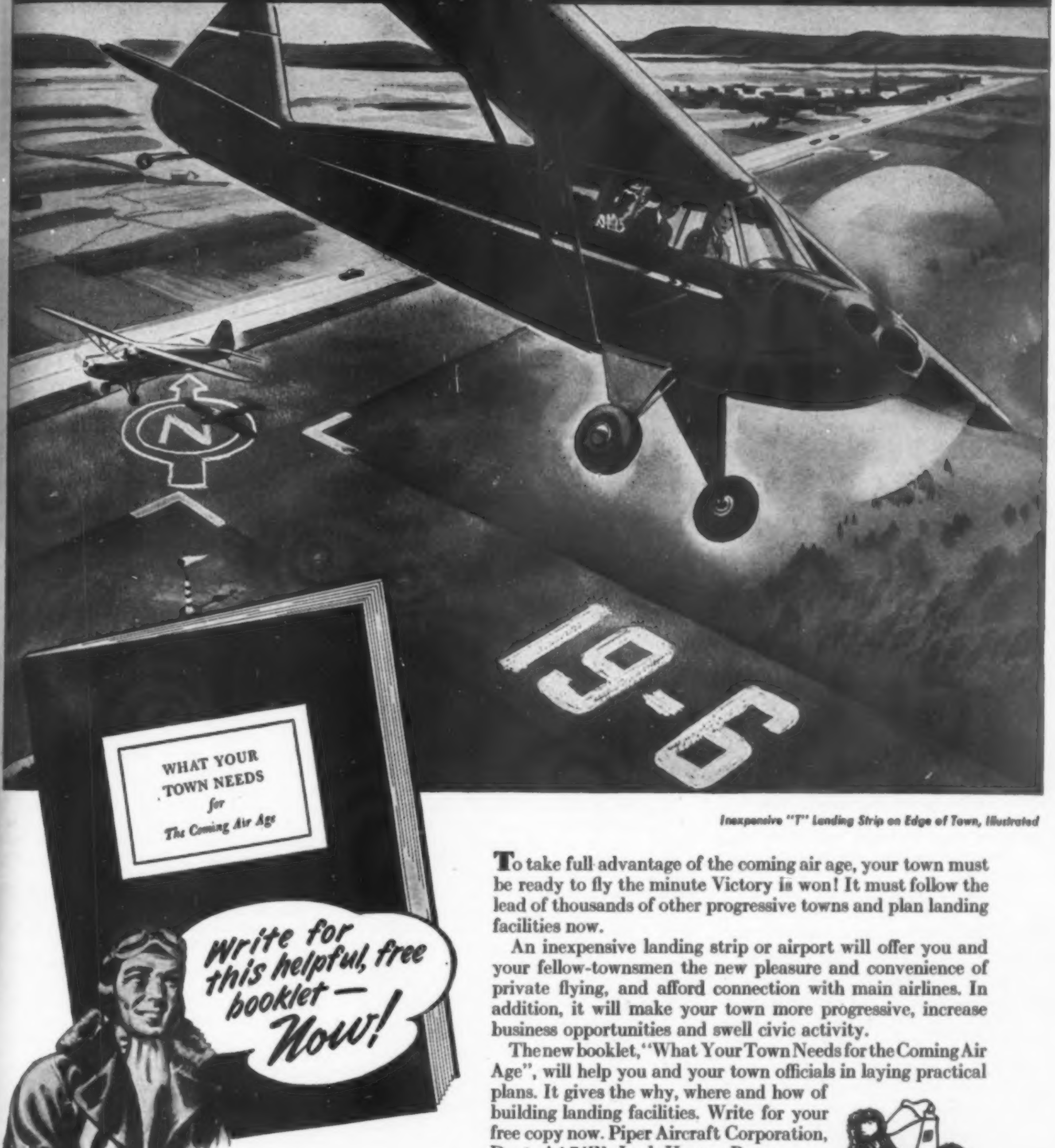
The Comet was designed and built by Noel R. Hockaday, founder and president of Hockaday Aircraft Corp. The firm is engaged in subcontracting for Northrop Aircraft, Consolidated Vultee and other airframe manufacturers.

The Comet is a two-place high wing monoplane of wood, fabric, and steel tubing construction. It has an overall weight of 1,050 lbs., gross weight of 1,650 lbs., full cantilever landing gear and dual wheel control. It is powered by a 130 hp. Franklin motor with top speed of 145 mph., cruising speed of 130 mph. and landing speed of 50 mph. Range is 500 to 550 miles.

Hockaday said work on the second plane is now under way and production will be stepped up as labor and materials permit. He estimated the plane could be sold at $3,000 on a production basis of 10 planes per week. Capt. Penny Rogers, veteran test pilot of Convair and other companies, is doing the test flying.

Before founding his own company in 1940, Hockaday was supervisor of welding at Lockheed Aircraft Corp. He began work on the Comet five years ago, but following Pearl Harbor there was a two-year lapse during which no development was attempted.

IS *Your* TOWN READY TO FLY?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WHAT YOUR TOWN NEEDS for The Coming Air Age
Write for this helpful, free booklet — Now!

Inexpensive "T" Landing Strip on Edge of Town, Illustrated

To take full advantage of the coming air age, your town must be ready to fly the minute Victory is won! It must follow the lead of thousands of other progressive towns and plan landing facilities now.

An inexpensive landing strip or airport will offer you and your fellow-townsmen the new pleasure and convenience of private flying, and afford connection with main airlines. In addition, it will make your town more progressive, increase business opportunities and swell civic activity.

The new booklet, "What Your Town Needs for the Coming Air Age", will help you and your town officials in laying practical plans. It gives the why, where and how of building landing facilities. Write for your free copy now. Piper Aircraft Corporation, Dept, AA74W, Lock Haven, Penna.

GET YOUR AVIATION BOOKLET—"Piper Cub . . . In War and In Peace." Full color, 32 pages. Covers history of light plane, Piper Cub planes, coming air age, how to fly. Enclose 10c in stamps or coin for postage-handling. Write Piper Aircraft Corporation, Department AA74, Lock Haven, Pennsylvania.

16mm. SOUND FILM—"The Construction of a Light Airplane." For distribution points write: Supervisor, Audio-Visual Aids, Extension Services, Pennsylvania State College, State College, Pennsylvania.

PIPER *Cub*

Points the Way to Wings for All Americans

Strong Plan Adopted to Give Veterans Plane-Industry Jobs

Eight Aircraft Firms On East Coast Will Go Beyond Federal Plans

THE AIRCRAFT WAR Production Council, East Coast, Inc., this week announced that its eight member manufacturing companies jointly have adopted a broad policy of giving preferential treatment to discharged veterans of World War II who need jobs.

Taking active leadership in the effort to return veterans to suitable employment, the aircraft firms declared they intend to go beyond the announced Governmental policy on preferential treatment wherever and whenever possible.

15,000 Already Hired

The announcement was part of a general report issued by the Council summarizing the policies of the various member companies and their experiences thus far in re-employing veterans and finding the right jobs for them. These experiences, supported by case histories, are being made available to all interested industrial firms.

Approximately 15,000 veterans of this war have been hired or re-hired so far by the eight East Coast companies. All of the companies have taken special steps to set up procedures for handling veterans' applications, with special treatment for those who have handicaps, either physical or mental. On the whole, they reported, veterans employed so far have adjusted well and are doing productive jobs.

The policy does not imply a guarantee of jobs for veterans, since many factors such as employment levels, changing production requirements and special qualifications for certain jobs must be considered in employment programs. However, the Council pointed out, it is a formal declaration that veterans will have first call, insofar as possible, on jobs they can handle.

Job Survey Developed

Experience reports from the member companies included the following points:

Bell Aircraft Corp.: Foremen and supervisory employes are given special instructions in handling personnel problems caused by psychiatric difficulties. A policy directive calls for special follow-up procedures to see to it that positive and final adjustments to factory conditions are made. Bell has assigned a small staff on a full time basis to do veterans' re-employment work and has developed a job survey to classify jobs from the point of view of possible veteran disability.

Chance Vought Aircraft Division of United Aircraft: Practically 100% of all veterans applying for jobs have been given employment. Few of them had been employed previously by the company, but it was possible to give four out of five shop work of various kinds.

Curtiss-Wright Corp.: The Airplane Division has employed about 400 new ex-servicemen in its four plants, 25% of whom are former employes. One carefully chosen member of the personnel department in each plant has been given responsibility for this program. The company reports that veterans show close application to duty and are rapidly developing new skills and abilities.

Eastern Aircraft Division of General Motors: The Trenton (N. J.) plant has developed a system for classifying jobs according to the physical standards required, making it possible to check veterans off rapidly against the available jobs. Eastern reports that returned veterans are generally in better shape physically than ordinary civilian applicants. Veterans also are less likely to quit. Some 850 members of the supervisory force have been carefully instructed in veteran follow-up work.

Fairchild Engine and Airplane Corp.: Ranger feels that employment of veterans has had a beneficial effect upon the morale of the entire working force, and has addressed a number of communications to veterans' hospitals and veterans' organizations, as well as the Division of Rehabilitation of Selective Service headquarters, requesting that it be advised of veterans who are available for employment. Seniority is cumulative for the period of service in the Armed Forces.

The Glenn L. Martin Co.: A large post of the American Legion aids veterans in locating jobs in the industry and adjusting themselves. The company's personnel department has a small staff assigned to the job of checking up on these employes and seeing to it that their special problems can be handled properly. A study has been made of the physical requirements for every job in the plant.

Republic Aviation Corp.: More than 700 veterans have been employed, many being referred through the Red Cross, Selective Service, Veterans' Administration and the Army and Navy Relief Societies. Some, when hired, quickly found that they had difficulty in readjusting to factory jobs, but in many cases it was possible to transfer such veterans to clerical jobs or other occupations.

The East Coast Council's report included a brief outline of 10 case histories of re-employed veterans, showing how adjustment was made. The Council announced that additional case studies of veterans now readjusting to war jobs may be obtained from the member companies.

No Acrobatics!

Aerial acrobatics, sometimes necessary in combat, will not be permitted by returning combat pilots, the War Department says. A course of indoctrination in the principles of flying safety will be given combat pilots and air crews of the Army Air Forces returning from overseas action before they are reassigned to active flying duty in this country.

'Fair Deal' Bill for WTS Personnel Follows Defeat of WASP Measure

ARMY PLANS to commission WASPs, making them a part of the regular Army were brought to a halt last fortnight when the House, after turbulent debate, killed the Costello bill by a 188 to 169 vote.

Gen. H. H. Arnold, commanding general of the Army Air Forces, had made a personal request for its enactment. The bill's defeat marked the first rebuff the AAF has taken from Congress since the start of the war program.

Following defeat of the Costello bill, Rep. Forest Harness (R., Ind.) introduced in the House legislation designed to force the Army Air Forces to give a "fair deal" to CAA instructors and trainees who have been released with the termination of the CAA-WTS program.

The Harness bill would:

(1) Require the War Department to maintain the same physical standards in commissioning CAA men that were in effect when these men enlisted in the Air Corps Reserve;

(2) Require the War Department to give such additional training as is necessary to qualify the instructors to meet the requirements for flying officers.

The WASPs now will remain civil service employes. This leaves them under surveillance by the House Civil Service Committee, headed by Rep. Robert Ramspeck (D., Ga.), which, in a critical report, has recommended that the Army "immediately" end further recruiting of WASPs and use untapped sources of available men pilots, already trained, for non-combatant duties.

The motion to kill the Costello bill was made by Rep. Ed. V. Izac (D., Cal.). Disclosing that the Navy plans to eliminate 17,000 cadets from its aviation training program and that the AAF already has eliminated 36,000, and turned them over to other branches of the service, Izac commented on the proposal to train and commission women flyers:

"Yes, they want to train more girls while at the very time many excellent pilots and instructors are being denied the right to continue flying at all."

Costello, May Lead Debate

Rep. Andrew J. May (D., Ky.), chairman of the House Military Affairs Committee, and Rep. John M. Costello (D., Cal.), author of the legislation, led floor debate in defense of the bill. They urged that Congress follow the advice of the military on military matters. They discounted charges that the AAF is not using all available "qualified" men flyers.

The allocation for the WASP program, carried in the 1945 fiscal year War Department appropriation bill, is $6,391,250. This, it is estimated, will allow the AAF to carry on the program at about its present strength of 1,000. The AAF plan had been to increase this strength to 2,500, and ultimately to 5,000. The cost to the Government of training 2,500 WASPs would be $50,000,000, and the cost of 5,000 would be $100,000,000, according to the Ramspeck report.

SORRY, GENTLEMEN

—*no enrollments accepted*

UNTIL the war is won, *California Flyers* will accept no enrollments for its famous courses. There are two sound reasons:

We are busy, just as are so many plants in Southern California, helping build equipment for the Aircraft Industry. And that's more important than anything else.

In the second place, we are planning completely new, modern courses for *after the war.*

It is obvious that developments in flying, maintenance and airport management which have come from the war have made 90 per cent of pre-war courses obsolete—ours, along with the rest.

And as you know, *California Flyers* courses have long been known for being not only practical but *modern in every respect.* Consequently, while our plant is converted 100 per cent to war work, we have discarded our old courses.

When the war is won, you will find not only a brand new *California Flyers* school, with brand new, up-to-the-minute equipment, but a brand new series of courses. We think it will be well worth waiting for.

FREE BOOK FOR MEN UNDER 17

We have a limited number of our old catalogs. They are obsolete in some respects, but contain much information that you will enjoy—descriptions of basic courses that will always be necessary. A copy of this book will be sent you, *free.* But if you want a copy, *write now.* When these are gone there'll be no more 'til after the war. Address California Flyers, Inc., Los Angeles Airport, Los Angeles 43, California Dept. **AA 7**

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ATC Contract With Airlines For '45 Nearly Cut in Half

ARMY AIR TRANSPORT Command contracts with U. S. airlines for the 1945 fiscal year are estimated at $86,711,779, approximately $70,000,000 less than the amount appropriated for ATC contracts for the 1944 fiscal year.

This was disclosed by Brig. Gen. C. R. Smith in testimony before the House Appropriations Committee on the 1945 War Dept. appropriation bill.

Naval Air Transport Service contracts, on the other hand, are slated to increase from the total of $50,457,985 allocated for the 1944 fiscal year to a total of $62,371,000 appropriated for the 1945 fiscal year. (*American Aviation*, May 1, 1944.)

The reasons given by Smith for the sizeable reduction in ATC contract estimates for the new fiscal year were:

● Economies have been effected in the cost of operation per mile.

● Previous year estimates were based upon utilization of 300 aircraft and that number has been reduced to 226. (50 to 60 planes are utilized within the U. S.)

● Utilization of aircraft has been reduced from 10 hours per day to eight and a half hours per day.

Somewhat over 98 per cent of the $86,711,779 for ATC contracts represents actual reimbursement cost, Smith reported. This would leave total fees to the airlines at $1,168,000, he said.

Following are data on ATC contracts.

● For the period prior to April 30, 1944, Pan American Airways led in the field, by a wide margin, with contracts totalling $65,269,249. Second to PAA, was Trancontinental and Western Air, with contracts totalling $19,866,708. Almost tieing for third position, were United Airlines, with contracts totalling $10,571,576, and American Airlines, with contracts totalling $9,577,472.

● For the six months period from Jan. 1, 1943 to July 1, 1943, Northeast Airlines topped the list of ATC contractors with contracts totalling $22,696,795. In second position, was Pan Am with contracts totalling $13,213,147. Following PAA were: American Airlines, with contracts totalling $12,255,929; United Airlines, with contracts totalling $10,227,009; and TWA, with contracts totalling $9,167,275.

Below is a listing of ATC contracts with airlines for the 1944 fiscal year, which ended June 30, 1944. The statement is made as of April 30, 1944.

	Obligations	Expenditures
All American Aviation, Inc.	$ 320,150	$ 189.962
American Airlines ..	21,175,365	4,591,061
Braniff Airways	4,321,625	182,345
Chicago & Southern Air Lines	2,695,825	1,334,782
Colonial Airlines	1,063.780	524.826
Continental Air Lines	5,226,520	798,925
Delta Air Corporation	1,332,640	389,533
Eastern Air Lines ..	11,495,154	2,083,585
Inland Air Lines ..	979,130	74,680
Mid-Continent Airlines	1,462,355	118,555
National Airlines ...	1,551,145	277,951
Northeast Airlines ..	4,477,195	356,237
Northwest Airlines ..	16,898,941	17,400,873
Pennsylvania-Central Airlines	3.299.780	528,503
Transcontinental & Western	16,934,393	12,377,890
United Air Lines Transport	23,383,585	6,760,567
Western Airlines, Inc.	3,746,781	878,695
Pan American Airways	20,587,587	958,153
Pan American Airways	1,919,700	14,055
Airlines War Training Institute	255,000	255,000
Southwest Airways Co.	225,624	126,047
Consolidated Vultee Aircraft Corp.	7,589,790	1,744,576
Braniff Airways, Inc.	5,353	5,353
Eastern Air Lines, Inc.	99	99
Board of Park Commissioners	8	....
American Airlines, Inc.	4,062	4,062
United Air Lines Transport Co.	157	157
Eastern Air Lines, Inc.	7,723	7,723
Total	$150,958,471	$51,984,208

AAF Training Base Transfer

Army Air Force primary training at Mira Loma Flight Academy, Oxnard, Cal., has been transferred to Polaris Flight Academy, Lancaster, Cal.

New 'Paul Revere'

EASTERN AIR LINES
MIDDLE EAST OPERATIONS

Judging from the steward and equipment, Maj. Kurtz Henley's EAL operations in the Middle East are slightly in the pioneering stage. Former DTM for EAL at Detroit, Maj. Henley is with the Air Transport Command.

Woodrum Committee Says:

'Unification of Armed Forces Should Wait Until After War'

UNIFICATION if the armed services into a single Department of National Defense should not be decided until after the war, the House Postwar Military Planning Committee, headed by Rep. Clifton Woodrum (D., Va.) recommended in a report filed last fortnight. There should be no "revolutionizing" changes in the military set-up during the course of the war, it declared.

The Woodrum Committee observed that:

● The Joint Chiefs of Staff have issued a directive providing for a special committee composed of Army and Navy officers to make a study and recommendations to the Joint Chiefs of Staff, "concerning the reorganization of national defense." The Army and Navy "are proceeding with this study."

● The organization of the Joint Chiefs of Staff, established under the President's war powers which expire six months after the cessation of hostilities, should be continued in existence by timely legislation.

While postponing action on the first subject of its inquiry—reorganization of the military, the Woodrum group, which includes the top-ranking members of House Military and Naval Affairs Committees, announced its future agenda, as follows:

● "Procurement and training of personnel, officers and men, for the military services: (a) For the regular services. (b) For Reserve components of both services, including the National Guard and the Naval Militia. Voluntary recruitment or recruitment through universal military training, or both. (c) Future employment of the Army and Navy ROTC machinery as a means of procuring and training Reserve officers, as well as other means of procuring and training such officers under either voluntary recruitment or universal military training, or both.

● "The organization, military status, distribution of Reserve components of the Army and Navy, including the National Guard and the Naval Militia.

● "The problem of supply: Research, development, continuing modernization. Continued maintenance of existing facilities, equipment, and stock piles of vital supplies. Mobilization of industries to meet major emergencies.

● "Probable postwar mission of the armed forces. Army, Navy and Air bases. Inter-relations between the sea, air and ground forces in maintenance and operation of such bases."

In connection with the third subject on its agenda—that of supply, the Committee reported the appointment of a group, comprised of four Generals, four Admirals and four civilian scientists "to formulate a plan for postwar research to meet the requirements of the Army and the Navy." Heading the group is Charles E. Wilson, executive vice chairman of the WPB. The civilian scientists are: Dr. J. C. Hunsaker of the National Advisory Committee for Aeronautics; F. B. Jewett, Bell Telephone research chief; Karl Compton, Massachusetts Institute of Technology; and M. A. Tuve of the Carnegie Institute.

BOAC Official on Tour

A. C. Campbell Orde, assistant to the chairman of British Overseas Airways Corp., is shown boarding a Trans-Canada Air Lines plane at Winnipeg enroute to Western Canada. He had conferred with TCA's vice-president, O. T. Larson. Orde had been on an inspection tour of BOAC routes in Africa, India and Australia before coming to U. S. and Canada.

Air Force Training Planned for Civilian Flying Instructors

A new program for Army Air Forces training is being prepared for civilian flying instructors by 10 screening boards, the AAF Training Command at Fort Worth has announced.

The program is "designed to reclaim for the air forces" men who were instructors at CAA War Training Service and civilian contract primary schools whether they have already been called to active duty in the AAF or other branches of the Army.

Instructors physically qualified and under 27 will be required to take the normal training course for aviation cadets. Those with 1,000 hours including 200 in aircraft of 200 horsepower or more will be eligible for a special 10-week ATC course. More than 60% of the instructors meet Air Transport Command air-hour requirements.

In addition to cadet pilot and ATC training, instructors have the option of training as aerial gunners, glider pilots and aviation technicians. Applicants must meet physical, mental and age requirements, but standard aptitude and classification tests are being waived. Graduates of cadet courses will be appointed flight officers or commissioned second lieutenants. Air transport and glider graduates will be appointed flight officers.

The Training Command said it had sent letters to more than 10,000 airmen and had received 6,000 replies. Screening boards are centered at Westover Field, Mass.; Middletown, Pa.; Atlanta; Lockbourne, O.; Chicago; Lincoln, Neb.; Fort Worth, Santa Ana and Spokane.

All Tangled Up!

British Writer Living Up In Clouds In More Ways Than One

C. G. Grey, stormy petrol of British aviation whose citric writings in *The Aeroplane* are read avidly the world over, may be losing his touch with what's going on in aviation. Or, at least, he may be losing his touch with facts. Writing in *The Edinburgh Evening News* May 9 as "Our Air Expert," Grey wrote the following among other things in a column noteworthy for its curious twisting of situations:

"In the United States the position is not unlike our own. Pan American Airways have been a monopoly of air traffic between the United States and foreign countries. Thus they are much in the position of B. O. A. (British Overseas Airways Corp.). A strong American shipping concern, known as American Export Lines, has tried to start up against Panam, as it is always called, and bought some big flying boats to operate. American Export, or Amex, were inexperienced in air operations and have recently joined up with Transcontinental & Western Airways, known as the W. A. It is about the most important air line inside the United States, and one which has long had ambitions to compete with Panam outside.

"The situation was made more exciting by a furiously energetic and enterprising New Zealander named Yerex, who started a little air line between two of the minute Central American Republics, gradually extending from one to the other till he had practically a monopoly of air transport in Central America, and then boldly challenged Panam to freeze him out of doing business with the United States. The U. S. Government could not well prevent a representative of friendly nations from taking traffic into and out of the States, so Yerex, trading on the 'good neighbor' policy of Mr. Roosevelt's Government, got in. Eventually he sold his business at a vast profit to Panam."

Divided as is the air transport industry, it seems likely that Pan American Airways, TWA, Lowell Yerex, American Export, and American Airlines, which has purchased American Export, would all agree unanimously that the renowned C. G. Grey has been living up in the clouds in more ways than one.

Big Waco Glider Carries 30 Fully Armed Troops

The Waco CG-13A glider will carry 30 fully-armed troops and has a useful load of 8,000 lbs., according to *The Aeroplane*, British magazine, in its May 19 issue.

Span of the large glider is given as 85 feet, six inches. It has a tricycle landing gear. Length is 54 feet, 2 inches and weight 16,765 lbs. fully loaded.

These figures compare with a span of 83 feet, 8 inches and length of 48 feet, 8 inches for the 15-place Waco CG-4A, and the span of 88 feet and length of 67 feet of the British Horsa I.

Wright V P in Action

George Chapline, former vice-president, sales manager, and a director of Wright Aeronautical Corp., now a commander in the Navy, is inspecting a blasted Jap pillbox in the Marshall Islands. He was formerly a Navy pilot.

Young Men From 11 American Republics Given CAA Training

Nearly 150 young men from 11 American republics began an aviation training program at three centers in the United States June 16 under supervision of the Civil Aeronautics Administration.

This is the third program of its kind conducted by CAA. A year's training is to be provided 147 young nationals from neighboring Latin American countries at the following institutions: 35 pilots at Purdue Aeronautical Corp., West Lafayette, Ind.; 66 mechanics at Spartan School of Aeronautics, Tulsa, Okla., and 46 communications and air traffic control technicians at the CAA Regional Headquarters, Kansas City, Mo.

It is the first time that the training of communications station operators and air traffic controllers of nationals from other countries has been undertaken. Pilots who now fly the 35,000 miles of airways operated by the CAA in the United States are assured that under the benefits of this program they may expect to find similar procedures in effect in the other Americas, carried out by English-speaking operators.

Intensive instruction in English will be given all students in addition to study and training in aeronautics. The University of Kansas City will handle the language phase of the program for the technicians, while the contracting aeronautical schools will provide it for pilots and mechanics.

In a move to replace eliminated Axis personnel, the first Inter-American program was begun in January of 1942. CAA trained 170 pilots, 103 service mechanics, 78 instructor mechanics, and 13 administrative engineers.

Cary Becomes Pogue's Executive Assistant

C. O. Cary, formerly of Alaska Airlines, has become executive assistant to L. Welch Pogue, chairman of the Civil Aeronautics Board. Cary succeeds J. Francis Reilly, who resigned to accept appointment to the Public Utilities Commission of the District of Columbia.

Cary

Cary is 27 years old and a graduate of Northeastern College, Boston. He did post graduate work at Massachusetts Institute of Technology. For the past 18 months, he served as superintendent of operations and general traffic manager for Alaska Airlines, with headquarters at Anchorage. He previously was connected with the traffic department of American Airlines.

J. H. Payne Leaves Chamber; Becomes Private Consultant Specializing in Transport

Resignation of John Howard Payne as manager of the Economic Development Department of the Aeronautical Chamber of Commerce was announced last fortnight.

Payne announced that he is opening his own office as a consultant economist in the Heurich Building, 1627 K Street, N. W., Washington. He said that as an independent consultant he will specialize in transportation, including operating and manufacturing branches of the aeronautical industry.

John C. Lee, who is directing administrative reorganization of the Aeronautical Chamber, said that no successor to Payne will be named and the work of the Economic Development Department will be absorbed into a Service Bureau which will include also the Research and Statistics, the Legislative and the Information Departments. Payne had headed the Economic Development Department for the past two years.

1,350 More Acres Added to N. Y. Idlewild Airport

Increasing the projected size of the postwar Idlewild Airport on Jamaica Bay, Queens, to seven and one-half times that of La Guardia Airport, New York City's Board of Estimate June 20 authorized immediate condemnation of 1,350 acres of land to be added to the present 3,150-acre site.

The Board authorized $2,414,000 in serial bonds for acquisition of the property and $2,500,000 in serial bonds "for construction, including planning and engineering supervision."

Of 1,000 dwellings which will be taken, 295 must be vacated by Sept. 20 this year and the remainder on a staggered schedule by July 1, 1945.

American Planes Fly 10½ Million Pounds 'Inbound' in 3 Mos.

American cargo planes transported 10,500,000 pounds of "inbound" strategic materials and commodities, worth $31,000,000, during the first three months of 1944. Office of War Information reports that most of the tonnage was flown "over-the-hump" in the China-Burma-India theatre.

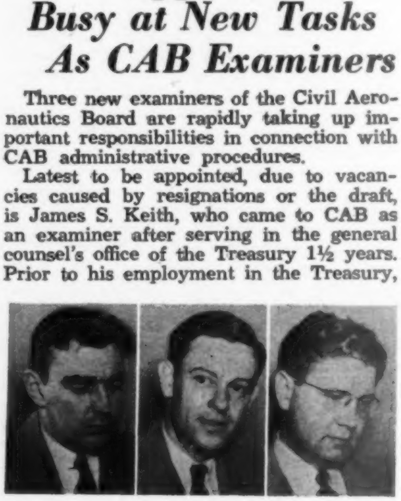
The Interdepartmental Air Cargo Priorities Committee of the War Production Board coordinates the program in which Foreign Economic Administration, the Army, Navy, and private airlines participate to insure an adequate supply of strategic materials to the U. S. and its allies. The Committee assigns priorities and monthly quotas for cargo to be shipped all or part-way to the U. S. chiefly by the Naval Air Transport Service and Army Air Transport Command.

Principal shipper in the program is FEA which purchases strategic raw materials and commodities abroad under directives from WPB and makes the shipping arrangements in the field. Of the 10,500,000 pound cargo carried during the first quarter of the year, FEA received 5,100,000 lbs.; Britain and Russia 3,800,000 and private American importers 1,600,000.

Three Appointees Busy at New Tasks As CAB Examiners

Three new examiners of the Civil Aeronautics Board are rapidly taking up important responsibilities in connection with CAB administrative procedures.

Latest to be appointed, due to vacancies caused by resignations or the draft, is James S. Keith, who came to CAB as an examiner after serving in the general counsel's office of the Treasury 1½ years. Prior to his employment in the Treasury, Keith spent eight months in the Navy. Previously, he had worked in the General Accounting Office. He is a graduate of the Washington College of Law.


Ruhlen Moran Keith

F. D. Moran, for eight years administrative assistant to Secretary of Interior Ickes, came with the Board as an examiner in April. He had been a trial attorney with the Bituminous Coal Division, of Interior. He also served nine months as counsel in connection with the 100 octane gas program of RFC. Moran received his law degree from National University.

Another appointee is F. Merritt Ruhlen, of Rochester, N. Y. After engaging in private practice in Rochester, Ruhlen was in the Army for a time. He received his law degree from Harvard.

Col. Fritz Confirmed As Brigadier General

Col. Lawrence G. Fritz, TWA vice president in charge of operations until he left for the Army in April, 1942, has been nominated by President Roosevelt and confirmed by the Senate to be a brigadier general.

Fritz

Col. Fritz has been commanding the North Atlantic Wing of the Air Transport Command. He was awarded the air medal for making hazardous test flights of new Army planes over the North Atlantic.

With Senate approval he became the fifth former airline executive to attain a general officer's rank. The others are Brig. Gen. T. B. Wilson, Brig. Gen. Thomas O. Hardin, Brig. Gen. A. D. Smith and Brig. Gen. C. R. Smith.

1st Manufacturers' Contract Termination School Opened At Univ. of Pennsylvania

The first contract termination school to be opened to manufacturers as well as Government officials began at the University of Pennsylvania, June 19, under the sponsorship of the Joint Contract Termination Board and the U. S. Office of Education. The project will serve as a model for a nationwide program utilizing about 50 colleges and universities throughout the country.

The schools will be open to representatives of all the Government procurement agencies and to contractors of every type including sub-contractors. John M. Hancock, Chairman of the Joint Contract Termination Board, estimated that about 90,000 war contractors and 10,000 Government representatives will receive this special training.

Michigan Votes $250,000 For Airport Planning

The Michigan State Legislature set aside $250,000 at its last special session to be allocated by the State Aeronautics Commission to all of the counties of the state for airport planning. At the Upper Peninsula Airport Conference, sponsored by the Michigan State Board of Aeronautics in Menominee June 14 and 15, representatives of the Board discussed planning needs with official representatives of the 15 counties of the Upper Peninsula.

The commission has allocated $104,500 to 12 cities and counties in the state, from the "aviation gasoline tax fund," on a matched dollar basis for actual airport improvement or construction. On April 5, funds were allocated to 23 locations in the amount of $120,500.

Offer Public Something Besides Peanuts at Airports, CAA Urges

SUGGESTIONS FOR putting an airport on a paying basis as the best way to make it useful, not only to flyers, but to the community it serves, are presented by National Aeronautic Association in its latest service bulletin. Design, decoration and maintenance are not basically as important as "the fact that the airport must pay," the bulletin states.

Sources of revenue of the Chicago Municipal Airport, which in the last three years has become self-sustaining, are described by Col. John Allen Casey, I.R.M. Air Corps, Superintendent. A large source of revenue comes from the assessment of airlines for landing fees based on the amount of scheduled operations by each company, at the rate of $200 per month each for the first three schedules, $100 for the next three, $50 for the next three and $25 for all remaining schedules.

Office space is rented in the terminal building and the restaurant is leased on a competitive basis for four-year periods. Hangar fees are at the rate of $1500 per year for 24,000 square feet and the sightseeing and charter flight concession is let out for four-year periods at $4000 annually.

Other methods of putting airports on a paying basis which are being considered by the Chicago Municipality include: admission fees for spectators, fees for gasoline and oil sold, fees from buses and taxis operating from the airport, fees from the telephone company, from barbershop, beauty parlor and theatre, locker rentals and fees from auto parking if no admission is charged.

Dudley M. Steel, Manager of the Lockheed Air Terminal at Burbank, Cal., recommends that such things as restaurants, cocktail lounges, sales of gasoline and oil, etc., be operated by the airport and not leased on a concession basis. He believes a small hotel and garage may increase profits. Spectators ramps such as the one at La Guardia Field bring excellent returns. He recommends careful arrangements for electric power, telephones and telegraph service which can frequently provide some profit to the airport.

Bowling alleys and swimming pools, newsreel theatres and steam baths all increase the possibilities for making an airport pay. "The more you can do to make your airport a community development where the public can go and do other things besides simply loaf, munch peanuts and watch planes, the greater becomes your chance of writing black instead of red figures in your financial report," Steele advises.

Airports of Entry

The list of temporary airports of entry as listed by the Bureau of Customs, Treasury Department, are:

Airport	Expiration date
Port Yukon, Alaska	July 6, 1944
Havre, Mont.	June 2, 1945
Chalks, Miami	Sept. 17, 1944
Niagara Falls, N. Y.	July 2, 1944
Ogdensburg, N. Y.	Dec. 10, 1944
Presque Isle, Me.	Feb. 20, 1945
John G. Hinde, Sandusky, O.	June 1, 1945
Spokane, Wash.	Oct. 1, 1944
Watertown, N. Y.	June 2, 1945

Airports designated as airports of entry without an expiration limit were announced as: Akron, O.; Albany, N. Y.; Brownsville, Tex.; Buffalo, N. Y.; Burlington, Vt.; Caribou, Me.; Cleveland, Detroit Municipal, Ford, and Wayne County; Douglas, Ariz.; Duluth Municipal, and Duluth Boat Club Seaplane Base; Eagle Pass, Tex.; El Paso, Tex.; Fairbanks, Alaska, Weeks Municipal; Juneau Alaska; Ketchikan, Alaska; Key West, Fla.; Meacham Field; Miami, Fla., Pan American Field and Pan American Seaplane Base; Nogales, Ariz.; Ogdensburg, N. Y., Ogdensburg Harbor Seaplane Base; Pembina, N. D.; Port Townsend, AAF Field; Put-in-Bay, O.; Rochester, N. Y.; Rouses Point, N. Y., Seaplane Base; San Diego, Cal., Lindbergh Field; San Juan, Puerto Rico, Isla Granda Airport; Seattle, Boeing Municipal and Lake Union; Skagway, Alaska; Swanton, Vt., Missisquoi Airport; West Palm Beach, Fla., Shonard Seaplane Base; Wrangell, Alaska Wrangell Seaplane Base.

Joint Aviation Show Committee Formed By 4 Aero Groups

A Joint Aviation Show Committee was formed in Washington last month to regulate the many aero exhibitions expected to be held after the war. Representatives of the Aeronautical Chamber of Commerce, Aviation Distributors and Manufacturers Association, National Aviation Trades Association, and National Aeronautic Association attended the organizational meeting, but it was reported that other recognized national aviation groups shall be invited to participate as they become active in the air show field.

The committee, temporarily headed by Joseph T. Geuting, Jr., of the Aero Chamber, determined that the postwar shows should be divided into two functional categories—public shows, at which admission may or may not be charged; and trade shows, at which the public will not be invited and at which admissions will not be charged.

Discuss 'National' Show

The committee agreed that a National Public Show should be held, probably annually, as well as regional public shows, and that no shows or exhibits should be held unless "specifically sanctioned" by the Joint Aviation Show Committee.

Representatives of organizations making up the committee were asked to submit plans to implement the sanctioning, operation, and control of air shows, to their governing bodies with the request that such bodies formally recognize the Joint Aviation Show Committee and provide for permanent representation on it.

Auto Industry's Aviation Orders Total $6,000,000,000

Manufacture of completed aircraft, parts, and sub-assemblies by the automotive industry from Sept., 1939 to last June 1 totaled $6,000,000,000, the Automotive Council for War Porduction reveals. Included in this were 250,000 aircraft engines.

Hawthorne Gets Permit

Hawthorne Flying Service, Inc., has been granted a contract to operate a general aeronautical business at Greensboro-High Point (N.C.) Airport. This is the second North Carolina community to be served by Hawthorne, a base previously having been opened at Rocky Mount Municipal Airport. Edward N. Hovis, former assistant manager of Hawthorne Airways, has been appointed manager of the Greensboro-High Point base.

CAA's Head Man Gets Two Kinds of Headdress

Charles I. Stanton, Civil Aeronautics Administrator, recently donned two distinctly different types of headgear in ceremonies in Oklahoma City and Medford, Mass. He was dubbed Chief Flying-Over-the-Clouds by the Kiowa Indians during the Oklahoma Civil Aviation Clinic and later received the honorary degree of Doctor of Science in graduation exercises at Tufts College. Stanton received his A.B. degree from Tufts in 1917.

Bill Giving CAA $533,000 Additional for '45 Voted

Regular Appropriation Allocates 35 Millions; CAB to Get $1,543,000

A DEFICIENCY APPROPRIATION bill, carrying additional 1945 fiscal year funds totalling $533,000 for the Civil Aeronautics Administration for maintenance and operation of air navigation facilities and technical development, was sped through both Houses of Congress before adjournment.

Congressional action also was completed on the regular 1945 fiscal year Commerce Dept. appropriation bill, with allocations of $35,162,000 for the CAA and $1,543,000 for the CAB.

Following is the breakdown on CAA's appropriation in the Commerce Dept. bill: general administration, $2,459,000; establishment of air navigation facilities, $4,715,000; maintenance and operation of air navigation facilities, $23,800,000; technical development, $580,000; safety regulation, $3,050,000; Washington National Airport, $559,000.

Of the $533,000 provided in the deficiency bill, $495,000 is for maintenance and operation of air navigation facilities and $38,000 for technical development.

The bill also contains a provision making $560,000 of the unexpended balance of funds appropriated for civilian pilot training for 1944 fiscal year, available for liquidation of CAA-WTS during the 1945 fiscal year.

A Senate amendment to the bill which would have provided $1,108,000 for development of civilian landing areas was stricken out in conference.

Following are facts on the additional funds carried in the deficiency bill:

● Air Navigation Facilities

The additional $495,000 is provided for stations at Balboa, C. Z. ($303,930) and Miami, Fla. ($191,070).

Thomas O. Bourne, Director of Federal Airways, disclosed to the House Appropriations Committee that CAA plans to purchase Pan American's Miami station for its assessed value of $167,396.

He told the Committee that:

"The policy of the Government operating these foreign stations, we think, is sound."

● Technical Development

The $38,000 recommended in the deficiency bill will be added to $99,000 allocated in the 1944 Commerce Dept. bill for completion of CAA's $137,000 program for power plant installation fire testing. CAA plans to construct a building at the Indianapolis Experimental Station for the test set-up which will include two wings for housing the necessary equipment, for storing the large amounts of fire-extinguishing agents, for testing of associated compartments, and to provide limited shop facilities. Air-blast facilities including an electric motor-propeller arrangement mounted in a cylindrical shroud also will be constructed. As a part of the fire-protection program it is also proposed to undertake the development of fire-resistant coatings for doped aircraft fabric surfaces.

● Liquidation of WTS

CAA Administrator, Charles I. Stanton, reported to the House Appropriations Committee that the total cost of liquidating WTS would come to about $1,600,000, that CAA would supply $560,000 of this amount and the Army and Navy the remainder.

The liquidation involves the disposition of 5,435 Defense Plant Corp. planes, 1,662 of which have already been disposed of. DPC and the Surplus Property Administrator have directed CAA to handle the disposition, Stanton said. He reported that disposition to date has been by advertisement and bids, but that CAA may later dispose of the planes by negotiation.

Col. Arnold Honored

Col. Leslie P. Arnold, right, is shown being awarded the Legion of Merit by Lt. Gen. Carl Spaatz, head of the U. S. Strategic Air Forces, for successfully planning and developing an organization for the ferrying of fighter planes and bombers from their trans-Atlantic landing points in England to operational bases in the United Kingdom. He was formerly assistant to Capt. Eddie Rickenbacker, president of Eastern Air Lines.

Congress Completes Action on Three Vital Pieces of Aviation Legislation

CLEARING ITS SLATE for the convention recess, Congress hurriedly completed action on three important pieces of aviation legislation:

● Multiple Taxation Study

This measure directs the Civil Aeronautics Board to make a study and recommendations on multiple taxation of air carriers. The bill was introduced in the House by Rep. Alfred Bulwinkle (D., N.C.), chairman of the aviation subcommittee of Interstate and Foreign Commerce Committee, following the Supreme Court decision in the Northwest Airlines case, holding that air carriers are subject to 100 per cent taxation by home States. A Senate companion bill was introduced by Sen. Mon. C. Wallgren (D., Wash.).

Attend ATS Meeting

Maj. Gen. Jacob E. Fickel, left, of the Army Air Forces Flying Training Command at Fort Worth, and Maj. William F. Long, of Dallas, operator of three Army contract flying schools, were among those attending the recent convention of the Aeronautical Training Society in New Orleans. Maj. Long was elected secretary of ATS.

● CPT Extension

This legislation extends the authorization for CAA's civilian pilot training program two years, or to June 30, 1946. Action on the extension was started by Sen. Pat McCarran (D., Nev.), who introduced the bill and held hearings on it, earlier this year, before his subcommittee of the Senate Commerce Committee. As passed by the Senate, the bill would have extended the program five years and limited annual appropriations to $30,000,000. The House approved a one year extension with no stipulation as to appropriation. The decision of conferees of the two Houses to extend the program for two years and make no provision as to appropriations was ultimately accepted.

● Airport Survey

This measure directs the Civil Aeronautics Administration to make a survey and recommendations on postwar airport needs. Drafted as a House Resolution, the bill needed only House approval to become effective. It was introduced by Chairman Clarence F. Lea (D., Calif.) of Interstate and Foreign Commerce Committee. A similar bill, introduced by Rep. Jennings Randolph (D., W.Va.), has been pending before that Committee for over a year.

Action by House Interstate and Foreign Commerce Committee on these aviation bills is interpreted as official acknowledgment that the comprehensive Lea bill is a "dead duck." The Lea bill incorporated provisions covering all three subjects.

The B.F. Goodrich Airline of the month

ALL AMERICAN AVIATION, INC.

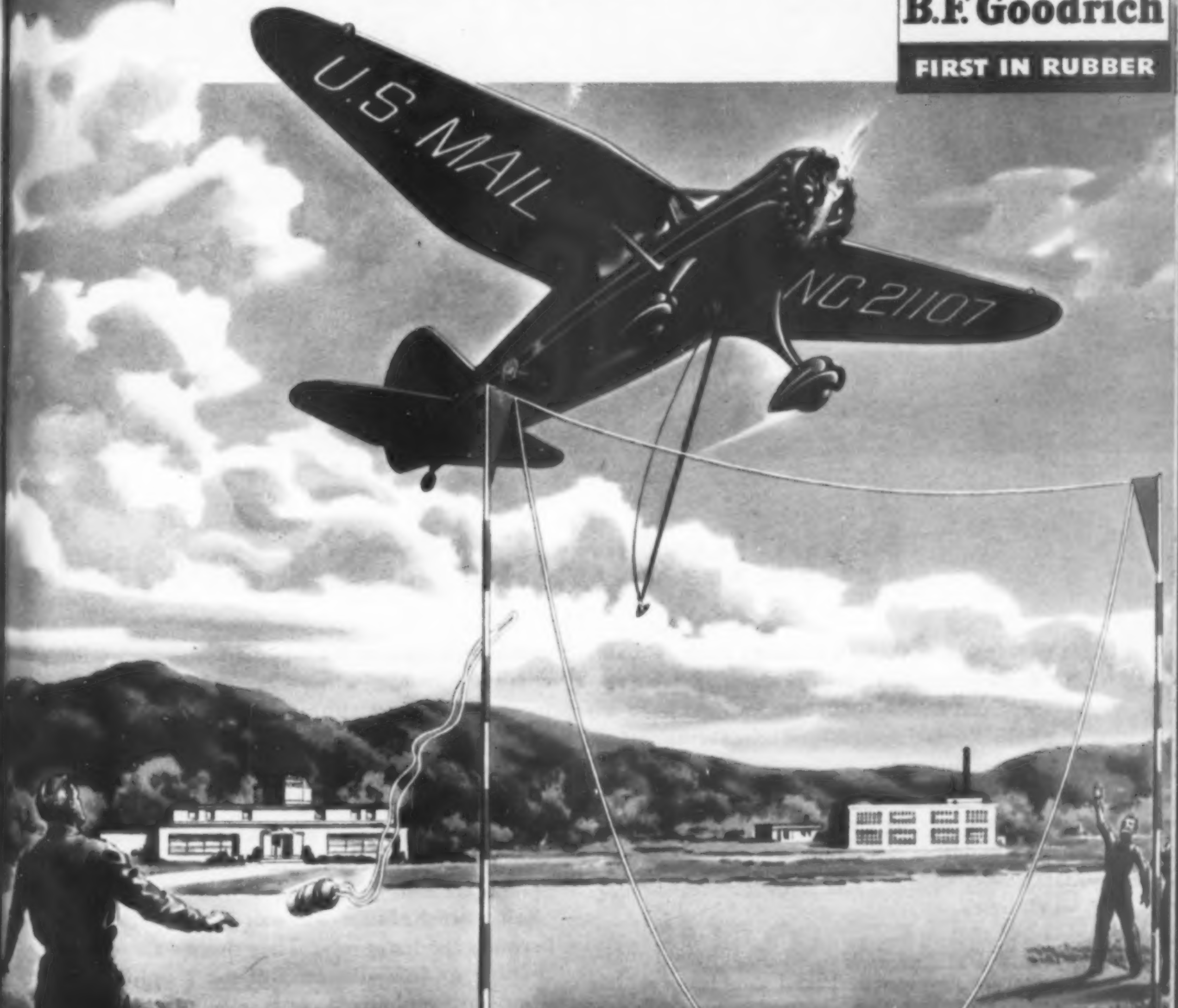
FIVE ROUTES radiating from Pittsburgh, Pa., serve 107 cities and towns in six states with a new form of fast communication—the Air Pick-Up. All American Airlines, Inc., operate a fleet of light, 2-man planes over these routes. They swoop down at pick-up stations—drop a bag of mail and express, and pick up another—all on the fly. By acting as a feeder to main trunk lines, and serving areas without regular airport facilities, All American is bringing closer the day when air service will be available to everyone.

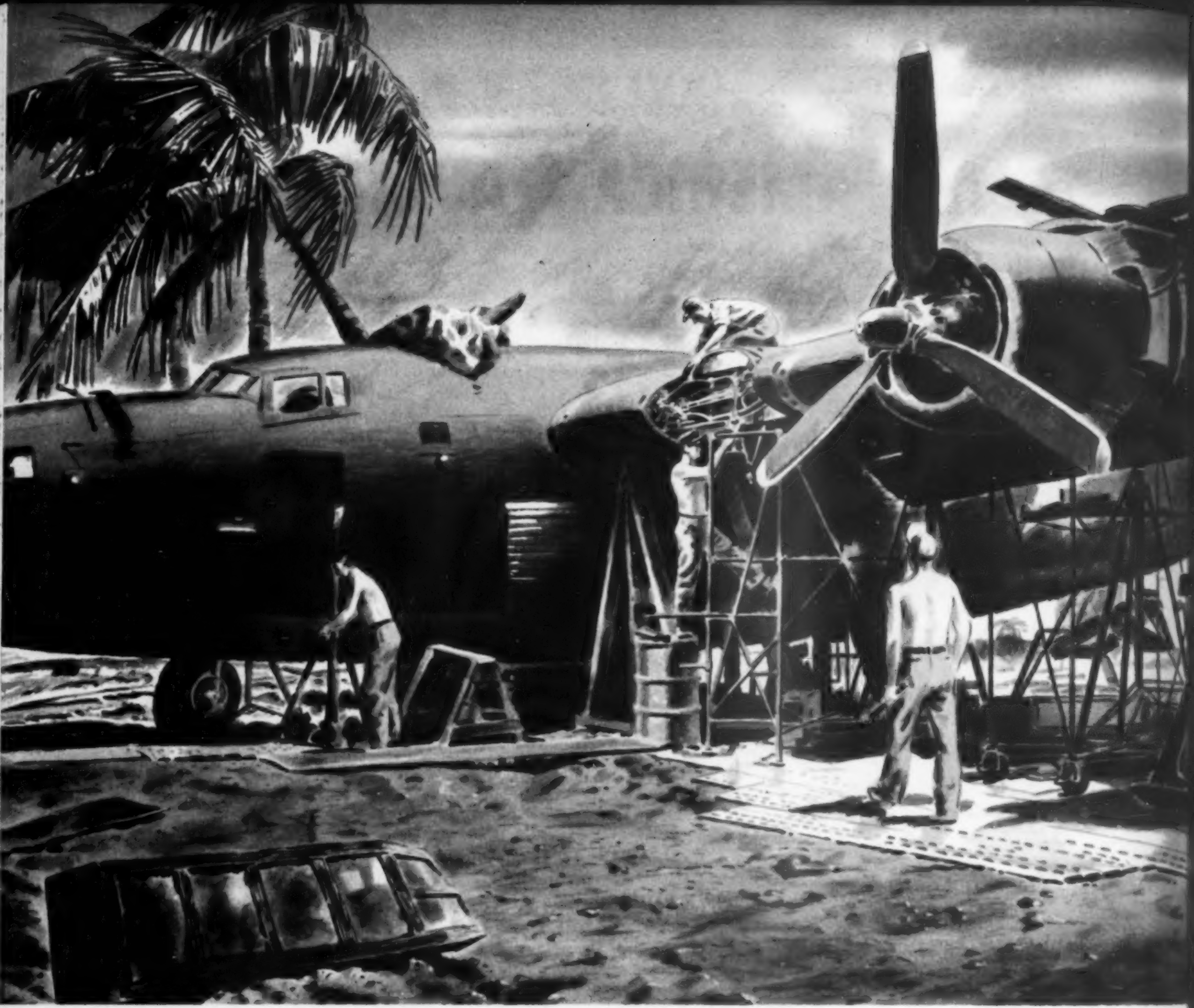
B. F. Goodrich, maker of Airplane Silvertowns, Expander Tubes for brakes, De-Icers, and more than 80 other aviation products, salutes All American for their excellent service record. They've earned the nomination as this month's "Airline of the Month."

In war or peace

B.F. Goodrich

FIRST IN RUBBER





New hydraulic hose means

WHEN A WARPLANE comes back to base with its hydraulic lines shot up, they must be replaced before that plane can get back in the fight. Replacing damaged hose sections used to be a complicated, time-consuming process. Attaching stock hose to couplings required a giant press . . . and not many advanced bases had them. The only alternative was to keep thousands of different hydraulic assemblies on hand at all times.

To improve this difficult supply situation, manufacturers developed special couplings which could be attached quickly and easily to the stock hose then available. But they weren't successful, because the rubber in the hose would stretch and flow when squeezed between the parts of the coupling—then pressure would pull the coupling loose.

ARMY E NAVY

Awards to 9 plants

B. F. Goodrich engineers were asked to develop a hose which would make the use of these couplings practical. The result was a hose with no layers of rubber outside or between the cord plies. Instead, protecting rubber was forced down into the fibres of the cord as it was braided around the inner tube. Thus there was no free rubber to flow—the jaws of the couplings bit into hard rubberized cords only, and held!

This new hose is 30 to 50% lighter and from 20 to 50% stronger than the old type. It is the

STRONGER, LIGHTER HOSE OPERATES AT LOW TEMPERATURE

Here's the new B. F. Goodrich Hose (Spec. ANH6a) that simplifies front-line repairing of the medium pressure hydraulic lines in our warplanes. Since it has no free rubber to stretch or flow, new couplings can be attached and not pull loose under pressure. Specially compounded for use in working conditions as low as —65° F., this hose is now Army-Navy standard for medium-pressure control lines.

ANH6—SIZE 8—2-44

faster front-line repair

only hydraulic hose that is size-controlled within such close dimensions that reattachable couplings can be used.

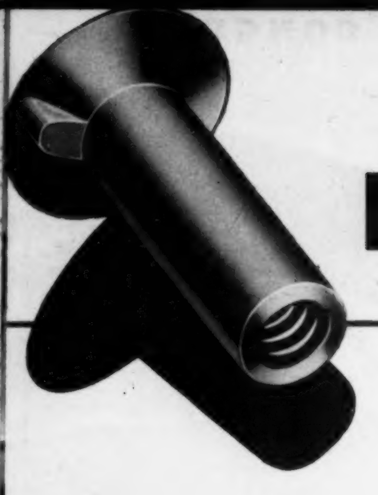
Now Army-Navy standard for aircraft medium pressure control lines, this B. F. Goodrich hose is greatly simplifying front-line repair. For instead of having to stock thousands of different complete assemblies, a few sets of couplings and a few reels of hose are all a base needs to keep its planes in the air. Assemblies are made up on the spot.

The use of this hose has benefited the war effort in another important way. Demand for the type of hose formerly used for both medium and high pressure lines far exceeded production capacity. The adoption of this new B. F. Goodrich Hose for all medium-pressure installations has greatly relieved a critical supply situation. The B. F. Goodrich Co., Aeronautical Division, Akron, Ohio.

In war or peace

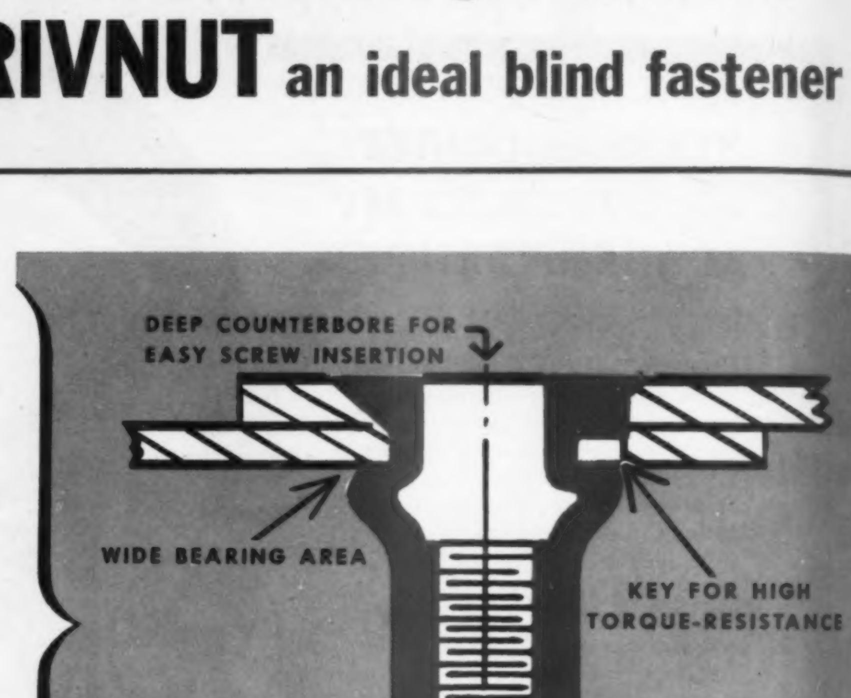
B.F. Goodrich

FIRST IN RUBBER



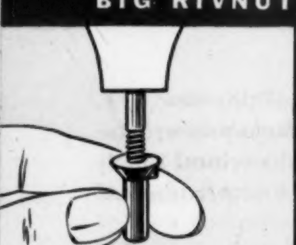
All these advantages make the **RIVNUT** an ideal blind fastener

- Installed and headed from one side
- Serves as rivet, as nut plate for attachment, or as both at once
- Simple one-piece construction
- Corrosion-resistant aluminum alloy
- Light weight—low cost
- Requires very small hole
- Forms compression fit
- Ready for use "as received"
- Can be used in metal, plastics or plywood

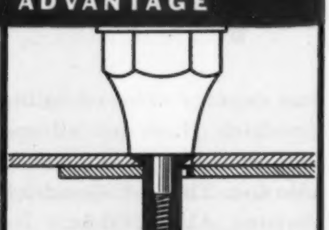


DEEP COUNTERBORE FOR EASY SCREW INSERTION
WIDE BEARING AREA
KEY FOR HIGH TORQUE-RESISTANCE
INTERNALLY THREADED SHANK
RIVNUT HEADS CLEARLY MARKED FOR GRIP RANGE

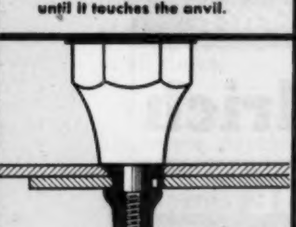
SIMPLE INSTALLATION IS BIG RIVNUT ADVANTAGE



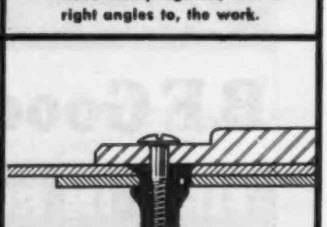
1 Rivnut is threaded on pull-up stud of heading tool until it touches the anvil.



2 Rivnut and pull-up stud are placed in holes with Rivnut head firmly against, and at right angles to, the work.



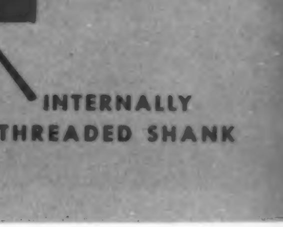
3 A squeeze on the tool lever retracts the pull-up stud slightly, causing a lateral bulge upset of the Rivnut.



4 When pull-up stud is removed, the Rivnut can be used as a nut plate. Threads grip accessory screw firmly.

New Folder, "Rivnut Data," Free

If you're not already using B. F. Goodrich Rivnuts, get complete facts now about these versatile fasteners that cut costs and speed production. For your copy of a newly edited data folder, write today to the B. F. Goodrich Company, Aeronautical Division, Dept. 0770, Akron, Ohio.



BLIND FASTENER doubles as a nut-plate or rivet or BOTH!

B.F. Goodrich RIVNUTS

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RIVNUT

IT'S A RIVET... IT'S A NUT PLATE

12½ Billions Go to AAF In War Dept. Fiscal Bill

1945 To See Downward Trend in Army's Air Program; Peak Passed

THE 1945 FISCAL YEAR War Dept. appropriation bill, making $12,610,000,000 available to the Air Forces, marks an over-all downward trend in the Army's aviation program.

The bill provides for the procurement of 41,345 additional planes, all of tactical types except "a negligible number of training planes".

"The Air Forces will have, in the main, built up to their planned strength by June 30, of this year", Gen. H. H. Arnold, commanding general of the AAF reported to the House Appropriations Committee. On the home front, the aviation program is being trimmed to the level necessary to maintain its present strength and make replacements for combat losses.

The maximum striking power of the air arm has not yet been obtained in the fields of battle, however, Gen. Arnold said. More than one-half of the AAF's present combat plane strength of 34,000 is now overseas. AAF total in planes is now 75,000.

"Production of bombers such as the B-29 will make up a large percentage of the total weight" of the 1945 fiscal year aircraft production program, Maj. Gen. O. P. Echols told Congressmen.

Marking the downward trend in the AAF program are the following factors:

War Situation. The question mark as to the relative strength of the Allied and Axis air arms, existing last year, has virtually been erased. This was reported by Lt. Gen. Joseph T. McNarney. The element of uncertainty last year caused the AAF to call for maximum expansion in all directions, he said, but now it can calculate its needs with more exactness.

Expenditures. Last year's allocation to the AAF was $23,655,481,000. Of this year's allocation of $12,610,000,000, only $1,610,000,000 represents a new appropriation and $11,000,000,000 is a reappropriation of previous year's funds.

Pilots. Pilot losses in battle have been less than expected, resulting in the transfer of 31,000 AAF trainees to the Ground Forces and approximately 9,400 to the Service Forces. The Air Corps' college training program will close by June 30.

Aircraft Production. Lower attrition rates than calculated have made plane requirements for the 1945 fiscal year "decidedly lower in number and considerably lower in total weight from those in the fiscal year 1944 estimate", according to Arnold. The 6,800 Army type planes manufactured in March, 1944 "may be considered as our planned strength in numbers," Echols said, "while production in terms of weight will continue to increase to March, 1945", and then start to decrease, as reductions contemplated in the present appropriation bill are reflected in production line output. The AAF's production program reduction in numbers is 26 per cent, but in weight, less than six per cent, it was reported.

Following are facts on the AAF program disclosed by War Dept. spokesmen at Congressional hearings on the appropriation bill, which was enacted last week.

Aviation's Share. Of the total amount appropriated to the War Dept., $49,350,840,700, about 42 per cent will be spent either directly or indirectly on aviation. Amounts allocated to other branches of the service for Air Corps' supplies are: Signal Service, $971,000,000; Chemical Warfare Service, $226,000,000; Ordnance Service and Supply $817,000,000. Total $2,014,000,000. Under the War Dept. allocation for "military poets", $134,671,400 is for aviation facilities. Of the $4,335,000.000 set aside by the Department for lend-lease, $2,271,028,525 will be referred to the Air Corps.

Air Forces Breakdown. The largest single item in the Air Forces allocation of $12,610,000,000 is $9,880,000,000 for equipment. Of this amount, $8,859,565,925 is for procurement of aircraft, engines, parts and spares. Other items in the breakdown are: personnel in all parts of the world, $800.000.000; travel and transportation $91,000,000; contractual services, $620,000,000; supplies, $1,200,000,000.

Unobligated Funds. The reappropriation of $11,000,000,000 of previous AAF appropriations for use during the 1945 fiscal year was made possible from the following sources: reduction in requirements, $1.000.000,000; reduction in prices from original estimates, $3,000,000.000; reduction in fixed price contracts, $800,000,000; reduction in cost-plus contracts, $1,500,000,000; reduction in obligations due to terminations and cancellations, $2,700,000,000; estimated recovering of funds, during 1945 fiscal year, through renegotiation, $2,000,000,000.

Plane Types. With emphasis on combat types, especially heavy bombers, the 1945 aircraft program will include only 3.6 per cent training planes, as compared to the 14.5 per cent training planes included in the 1943 program. Cutbacks have already been made on light transports and trainers in the amount of $2,700,000. The 1945 airplane program consists of planes with an estimated airframe weight of 569.000,000 lbs. The average weight per airframe produced during the last six months of 1943 was 8,500 lbs. The estimated average weight per airframe to be produced in the last half of fiscal year 1945 is 14,800 lbs.

Price Reductions. Arnold reported sizeable reductions in plane costs. He said that the price on the B-17 has been lowered 34 per cent; on the B-24, 39 per cent; on the A-26, 26 per cent; on the P-61, 17 per cent; on the P-47, 16 per cent. Great reductions in manhours required on construction of planes, he said, have been an important factor in lowering prices. As an example, Arnold told Congressmen that the manhours originally required on the B-24 were 50,000, but have now been scaled down to 20,000.

Unfilled Orders. Orders for 20,000 planes, placed prior to July, 1943 have not yet been filled. Orders for about 4,000 of these planes were placed prior to July, 1942. In the main, Echols reported, these orders were for "the newest types of airplanes". The orders were for A-26's, P-61's, B-29's, C-46's, and C-47's.

Comptroller Curbed

Congress completed action on the George-Murray contract termination bill, before adjournment. In final action, the General Accounting Office's authority to reopen settlements made in termination agreements by the procurement departments was restricted to cases involving fraud. This was a hard-won victory for the procurement departments, which have contended that review by the Comptroller General of all termination settlements would involve delay disruptive to an orderly transition from wartime to peacetime production.

Helicopters. Although the AAF appropriation for helicopters was not released, it was disclosed that the Bureau of the Budget sliced the requests for helicopter development by $65,000,000 "because deliveries to date have been slower than expected." This action took 1,200 helicopters out of the AAF program. Reporting that the AAF is still "enthusiastic about helicopters and their future", Echols told Congressmen that experimental work was progressing slower than expected, and that "lifting power" is the primary limitation. He said that the AAF now has a "new helicopter which has a lifting power approximately one-third greater than the models we were flying last year."

Gliders. Looking toward intensive use of gliders, over great distances in many parts of the world, the AAF has set aside $90,000,000 for their production during the present fiscal year. Emphasis will be on gliders larger than any that have been built to date, Echols said.

Jap Planes. Answering inquiries by Congressmen, Arnold reported that "until recently the Japs have never had any long range bombers. There have been one or two of these, as we have seen a certain number during the past couple of months." The Jap medium bomber, he said "is about as good as our B-25, with about the same performance, but no better and no worse." He rated our fighter planes, with armor, leakproof tanks, better range and increased fire power, as "superior" to those of the Japs.

German Planes. Arnold credited German planes with being "worthy antagonists" and said that numbers and the improved performance of some of our latest fighters "turned the tide" in our favor. "The Germans started the leakproof tanks and they started the armor," he said. On German bombers, he commented: "I think the Junkers bombers and some of the others compare favorably with ours, and the Focke-Wolfe long-range bomber compares favorably with our B-24 and B-17."

Civil Air Patrol. The $3,000,000 asked by the War Dept. for the activities of the Civil Air Patrol was sliced by the Budget Bureau to $1,000,000 and then raised, by Congressmen sympathetic to the program, to $2,000,000. The three main useful purposes of the CAP, Echols stated, are: towing targets; searching for lost airplanes; training 17-year-old cadets who are preparing to enter the AAF.

WASPS. The Air Forces were allocated $6,391,250 for the WASP program, which, it is estimated, will enable the program to be continued at about its present strength. In its report, the House Appropriations Committee paid high tribute to the work of the WASPS and discounted charges that the women flyers were displacing already-trained men flyers available to the AAF for non-combatant duties.

West Point Aviation Training. In the present graduating class from West Point, it is anticipated that 171 will graduate with wings. In the class of June, 1943, 206 graduated with wings, and in the class of January, 1943, 166 graduated with wings.

Training Foreign Students. The AAF will contract with five schools for the training of 8,000 foreign students, 4,000 pilots and 4,000 mechanics, during the present fiscal year. The $21,000,000 cost of the program is charged to lend-lease.

Going Bye Bye!

'Short Snorter' Now 'Long Snorter'—Soon No 'Snorter' at All

THE "SHORT SNORTER" business has turned into such a racket that various efforts are now being made to squelch it. The Navy Department is understood to have given orders to at least one of its contract carriers asking its pilots and flight crews not to indulge in the signing of bills.

No one quite knows how the "Short Snorter" club started, but Pan American Airways people in Alaska and other regions were among the originators. In the early days the owning of a "Short Snorter" bill was a real distinction. It was one of the genuinely interesting and novel activities of airmen which spread to trans-ocean flying when that phase of the business began.

Since the war a "Short Snorter" bill has lost much distinction. Outsiders have scrambled into the picture and made it ludicrous. Actors and actresses on foreign camp tours have especially gone to such extremes that one wonders what the point is in possessing a signatured bill. Some collections run into yards in length. Pestering of notables has also gone to an extreme which may account for efforts to put a quietus on the whole shebang. At present it's a mark of distinction not to possess a "Short Snorter" bill. There are indications, too, that some outsiders have used the gag as a racket. For awhile one had to make a trans-ocean flight to be eligible; now it doesn't seem to matter.

Girdler to Leave Aviation

T. M. Girdler, chairman of Republic Steel Corp. and Consolidated Vultee Aircraft Corp., revealed in a speech in Cleveland June 16 that he would retire from the aviation industry as soon as war conditions make it possible, and again devote his full time to steel.

Navy Course at Martin Plant

A new Navy training course to teach technicians to serve as field instructors in the various systems of the PBM Mariner has been established at the Service Training School of Glenn L. Martin Co., Baltimore. Newly trained instructors will serve with mobile training units. Classes are made up of 12 men, each holding the rank of Petty Officer, 2nd Class, or better.

Sample Contract Drawn Up for Leasing Municipal Airports to Private Concerns

As an aid to cities considering leasing municipal airports to private concerns, or at least making a management contract, Steadham Acker, manager of the municipal airport, Birmingham, and aviation consultant for Oklahoma City, has drawn up a sample contract.

Acker points out that some cities are giving considerable thought to such a plan to get the airports out of politics and putting them on a sound operating basis. He says there are many things to be considered in arriving at a conclusion on such a proposal, but at least such a proposal is worth consideration.

He prepared the sample contract between a city and lessee, or contract operator, with the following basic principals in mind:

1. It is a generally accepted fact that privately operated business is more efficient than government operation.
2. The operators on the field, such as airlines and fixed base operators, would prefer to do business with a business firm rather than public officials who are subject to political influences, provided said operators are properly safeguarded against excessive fees for use of the field.
3. The only way private management can make increased profits is by increased use of the field and its facilities, and thus it would be good business to maintain proper public relations for the airport and to advertise its facilities.
4. Expenditures that would pay dividends could be made by private management without political criticism.
5. Public officials would be relieved of political consequences of operation of the airport, and this very important investment in progress would be taken out of politics.

The sample contract form follows:

1. General explanation of terms in the contract (Operator to be known as "Management").
2. Management to pay a return to city that would represent a greater return (or smaller loss) to the city than shown with operation by city. Return from the contract means the total cash paid plus savings by assumption by management of operation costs.
3. Management to be responsible for having qualified manager and staff to operate airport, and be able to show its ability to furnish same. (City's Manager could be retained if desired). Management to assume all operation responsibility and cost except capital outlays for field improvements. Operation costs to be assumed by management to include all usual items of expense such as maintenance of landing area and city owned buildings, utilities, salaries of operation personnel, etc.
4. Management to collect and retain all fees and rents from airlines, concessionaries, fixed base operators and other airport revenues, same to be taken into account in arriving at annual sum to be paid by management as rental for full use of airport.
5. Responsibility of management to put forth reasonable effort and expense to increase the use of and public interest in the airport and its services and facilities.
6. Any policies, particularly those of a political nature, that are to be enforced by the city, should be written into the contract; or the rights of the city in making of policies for operation should be specified. (Unrestrained dictation of policies by a political body could easily make any management go broke.)
7. Airlines to be protected by maintaining existing fees for use of field or placing ceiling thereon. (Fees should be based on number of schedules.) Fixed base operators should also be protected same as airlines.
8. All existing contracts and obligations of city with airlines and other users of airport to be assumed by management and adhered to unless renegotiated by mutual consent.
9. Management to guarantee that at least one good fixed base operator and flying school, with adequate equipment and qualified personnel, be on field, charging reasonable rates, even if management must operate same.
10. Management to be responsible for having good restaurant or eat shop.
11. Management to police flying activities, be responsible for enforcement of flying rules and regulations, and in general to perform all duties usually performed by airport manager and his staff.
12. In general, management to be responsible that the public be served with all the usual facilities expected at an airport, and at reasonable and competitive rates.
13. Contract should be for reasonable length of time, but have a cancellation clause for both parties that would have fair protective features for other party in case of cancellation by either.

(Acker added that it may be more economical for the city to maintain field lighting equipment and runways because of its electrical and street paving departments, in which case management would pay more as rental for the field.)

Burlington Celebrates

Mayor Burns of Burlington, Vt., is cutting the ribbon opening the new administration building at the city's airport. At left is Sigmund Janas, president of Colonial Airlines.

Koch Returns to CAA

Returned to inactive status, Lt. Col. Alfred S. Koch, first of the Reserve Army Air Force officers in CAA to be called to active duty, has returned to CAA as a consultant to Administrator Charles I. Stanton. Koch was one of 95 reserve officers in CAA called to active service under the National Defense program. He was assigned to the Army Air Inspectors office under Maj. Gen. Junius Wood.

Air Veterans Flying Their Second War

The three Lockheed test pilots, standing, are flying their second war. They are, left to right, Alex Black, veteran of the Russian Air Force; Will Dougan, who flew with the Canadian Air Force; and Walter Varney, Army Signal Corps pilot who after World War I launched airline development in the West. Seated are E. A. Jaquish, former TWA pilot, now chief of operations at the pilot house, and Avery Black, assistant chief test pilot, formerly head of Varney Air Transport.

112,000 Private Planes Expected By Insurance Official After War

ABOUT 112,000 privately owned aircraft will be in operation in the U. S. four years after the war, predicts James R. Graham, production manager for the U. S. Aircraft Insurance Group.

Greatest aviation developments in the period immediately after the war will probably be in feeder and pickup services, flying schools and fixed base operations, industrial aid, private commercial and private pleasure flying and airports, he believes.

"The present 18,000 privately owned aircraft will increase to 40,000 by the end of the first year following the cessation of hostilities," Graham explains, basing his assumptions on an average plane cost of $2000. "To this will be added about 24,000 aircraft per year for the succeeding three-year period."

High Utility Value

Graham defines private commercial planes as comparable to the auto driven by the traveling salesman and predicts that development of airports and landing strips will give this type aircraft a high utility value. "It is exceedingly difficult," he states, "to estimate how many aircraft will be employed in this type of work but a conservative figure should be about 2000, costing about $2500 per plane.

Similarly there will be great expansion in the number of aircraft used for the transportation of corporation executives and personnel. Envisaging about 2500 planes in this type of service a year after the war, Graham finds they will be predominately the more expensive models varying from $10,000 to $150,000 and seating between three and 20 passengers.

With the number of applications to the Civil Aeronautics Board for feeder and pick-up line certificates probably reaching 1000 by the end of 1944, Graham states "it can be safely assumed that at least 300 will be in operation within two years after the war." He also points out that in the last three years, $500,000,000 have been spent on airport construction with a net result of over 3000 airports. Each of these first class airports is expected to have at least one flying school and fixed base operation for charter and sight-seeing services.

Graham concludes that this rapid development of aviation activity will bring a corresponding demand for aviation insurance of all types with annual premiums totaling in the neighborhood of $22,550,000 divided in the following categories:

Feeder and Pick-up	$7.500.000
Flying Schools and Fixed Base	6.000,000
Industrial Aid	6.000,000
Private Commercial	250,000
Private Flying	2.400.000
Airports	400,000

Airmail Envelope Demand Big

The Post Office Department reports that the use of 6-cent airmail stamped envelopes by U. S. armed forces overseas has increased to such an extent that it is not possible to manufacture sufficient quantities to meet the demand. Present output of the envelopes is 40,000,000 per month. To speed production, the red, white, and blue border on the envelopes is being eliminated, increasing output approximately 50 per cent. Members of the armed forces abroad are getting the entire output.

Pilot-less Planes, Launching Ramps Studied by Experts

Allied technicians are reported to have examined several robot-launching platforms in France from which Germany had sent a number of pilotless planes into Southeastern England. Dud planes which fell but failed to explode were being carefully studied by Allied experts.

No conclusions were announced from abroad, but Washington military observers believe the craft are jet-propelled because fire is discharged from the tail in flight. Radio engineers discounted reports that the weapons may be radio-controlled, concluding that they are present at point of origin and directed by automatic fixtures inside the craft.

One informed Washington observer declared, however, that "a small percentage" of the robots may be radio-controlled.

Launching of the robots was likened to the setting off of skyrockets, except that the platforms are believed to be only slightly inclined. A booster device to give the craft a high takeoff speed is likely, said one aeronautical scientist. Many of the planes are reported to have been shot down over the Channel.

Revised Master Plan Doubles Airport Total

A fifth revision of the Master Airport Plan, based on surveys which have been in progress for the last several months, will be announced early in July by the Civil Aeronautics Administration.

The latest revision, it is understood, contemplates expansion of the airport program to some 6,000 fields. The last survey envisaged the need for 3,000 airports. A great percentage of the contemplated increase will be for Class I and Class II airports to meet the expected growth in postwar private flying.

Florida High Schools May Offer Courses in Aviation

The aviation division of the Florida State Chamber of Commerce voted June 20 to ask the State Education Board to make aviation a part of the curriculum in Florida's high schools. "There are hundreds of thousands of state-owned acres that could be deeded to high schools for use as flying fields," said W. B. Haggerty, vice chairman of the division. "We should tell our school system that this is what we want for our boys."

Birmingham Aero Club Election

The Birmingham (Ala.) Aero Club announces the following officers have been elected for the coming year: Holland Cox, president; Troy Arnold, first vice-president; Brown Hill, second vice-president; James Mills, third vice-president; George Cowden, treasurer; and Edith Wideman, recording secretary.

New England ATA Joins NATA

The newly formed New England Aviation Trade Association has affiliated with the National Aviation Trades Association. Lee Bowman of Keene, N. H., is president of the New England association, and Joseph Garside of Norwood, Mass., secretary.

Boston Recognized by CAB As Important Air Terminus

TWA, Northeast, United Allowed to Enter City; Eastern Wins Extension

BOSTON HAS WON an important place in the postwar development of air transportation as a result of a Civil Aeronautics Board decision June 13 granting three new carriers access to the New England metropolis and giving a fourth permission to fly between Boston and New York.

The successful applicants and the routes awarded are: Northeast Airlines, between Boston and New York-Newark, via Worcester, Mass., Waterbury, Conn., New Bedford-Fall River, Mass.; United Air Lines, between Cleveland and Boston, via Hartford, Conn.; Transcontinental & Western Air, between Pittsburgh and Boston, via Williamsport, Pa., Binghamton and Albany, N. Y.; and Eastern Air Lines, between Newark-New York and Boston, as an extension of its Routes 5 and 6 which originate in San Antonio and Miami, respectively.

CAB's decision signalizes the end of a bitter struggle by airlines, and aviation interests of Boston and Massachusetts, for new or amended services to the New England area. It was expected that motions for re-argument or reconsideration would be filed by some of the airlines whose applications were disapproved. Among those refused routes were: American Airlines, Colonial Airlines, and Seaboard Airways.

Goes Beyond Examiners

The Board, in awarding the routes, went far beyond the recommendations of its examiners, Thomas L. Wrenn, Frank A. Law and Albert F. Beitel. Wrenn, who heard the Boston North-South case, had recommended that Northeast be given a local service route, via various intermediate points between Boston and New York and that American should be certificated into various new intermediate points. He had recommended that all of the other applications be denied.

Examiners Law and Beitel, who heard the Boston West case, had recommended that all applications for service between Boston and cities to the west, be denied.

Aside from the position which Boston has won on the postwar air map and the new revenue possibilities for the successful applicants, the Board's decision may have an important effect on future air transport policies, particularly the expansion programs of the carriers themselves. In effect the Board re-affirmed the policy first announced in the North-South California cases where the point-to-point theory of competition came into being.

In the instant case, the Board was practically unanimous in its decision on the need for new air transport service for the New England area. Metropolitan Boston, with its population of 2,350,000 people, was regarded as rich in traffic-generating potentialities. But on the question of point-to-point competition, the Board divided sharply, with two members, Harllee Branch and Oswald Ryan, suggesting, in a separate concurring opinion, the possibility of rejecting the "presumption in favor of competition" doctrine in favor of a theory that would authorize competition only upon affirmative evidence that the public interest requires competition on such a route.

"The majority, in the present opinion, while expressly reaffirming its belief in the soundness of the presumption doctrine, offers an interpretation of that doctrine which, in our view, would seem to render it largely meaningless," Branch and Ryan stated.

"The question is thus left in an unsatisfactory state of confusion and uncertainty. Insofar as the majority opinion may be said to reaffirm the doctrine of presumption with respect to paralleling competition, we are not in accord. In our opinion the proper role of competition in the future development of our domestic air transportation is a question of such vital moment to that development that this Board's policy with respect to it should be clearly defined and soundly based."

They further stated that "to assert that a prima facie case for competition on a particular route is established by a mere showing that sufficient traffic exists to support a competing service declares a principle which we believe to be without support either in the Civil Aeronautics Act or in the facts which prevail in the domestic air carrier industry." They

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'13' Unlucky Number? No Sir! Says Solomon

From here on in, No. 13 will hold no special terrors for S. J. Solomon, chairman of the Board of Northeast Airlines. On June 13, Northeast Airlines and Solomon figured in three favorable decisions.

First in importance from the viewpoint of personal satisfaction was the action of the Civil Aeronautics Board in giving tacit approval to competition in international postwar aviation as distinguished from the "chosen instrument" theory. Solomon was chairman of the Airline Committee for U. S. Postwar Policy and as such led the fight of the 16 domestic airlines for postwar development on the competition theory.

Second in importance was CAB's decision granting Northeast an extension of its route from Boston to New York, via several intermediate points, a 185-mile extension.

Then, to give the day a completely happy ending, CAB approved Northeast's acquisition of Mayflower Airlines, which adds approximately 127 more miles to Northeast's system.

Boston Speeds Plans for Construction Of Airport for Transoceanic Business

The city of Boston and the Commonwealth of Massachusetts are speeding plans for construction of a modern airport which will be big enough to accommodate the largest transoceanic cargo and passenger planes after the war.

Through mutual agreement, the Commonwealth recently cancelled the lease held by the city of Boston on airport property and paid the city some $1,030,000 for its investment in the existing airport. It then allocated $680,000 for the purchase of land to be used for new terminal buildings, plans for which are now being completed.

Work is now in progress on one of two runways which, it is planned, will be constructed from clay taken from the bay. One runway will be 7,000 ft. long, the other 5,000 ft. It is expected both will be completed this year.

The runways will be covered temporarily with cinder surfaces until settling has ended and until some 100 test borings have been completed to determine the efficiency of the base construction. Hydraulic fill work is being done under the terms of a million dollar contract held by the Gahagan Company of New York. After all tests have been completed, the runways will be surfaced with asphalt and white stone.

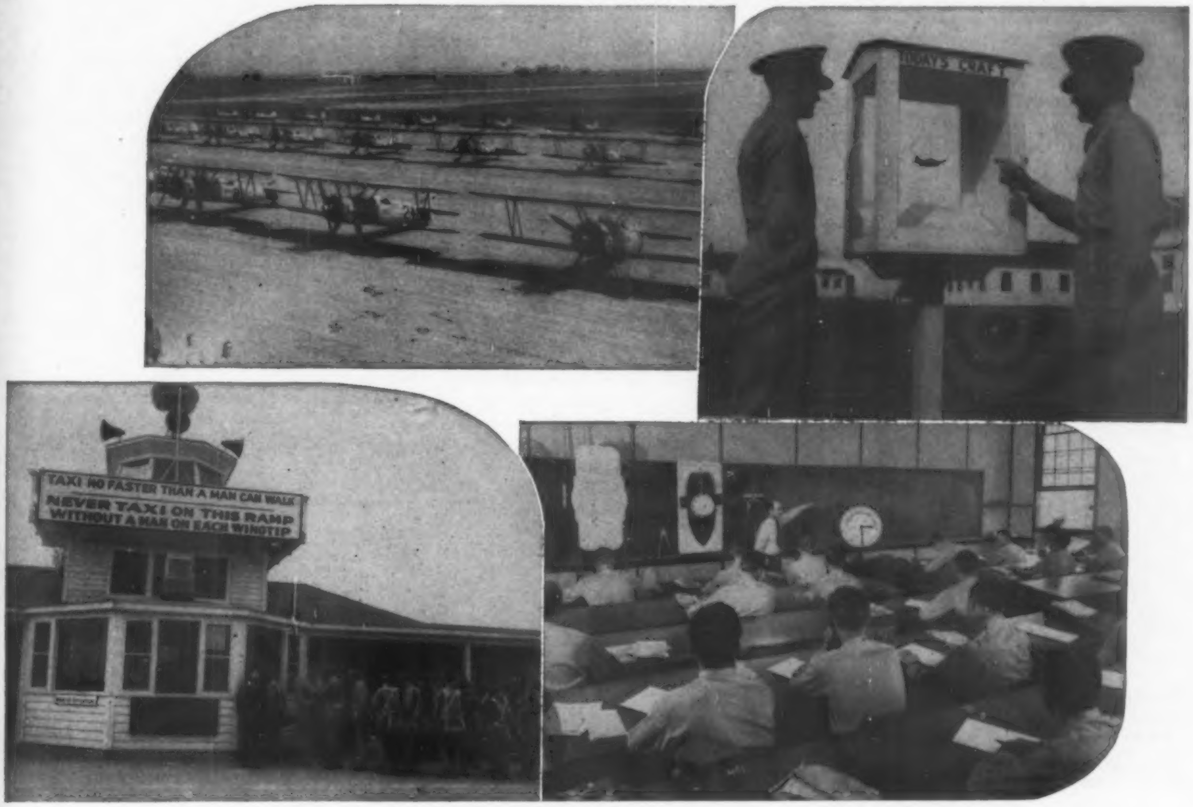
Plans call for ultimate construction of two additional 7,000 ft. runways. Two of the three 7,000 feet landing strips may be extended to 10,000 ft. if necessary, and land has been provided to extend the 5,000 ft. strip to 8,000 ft., if required. All runways are parallelable.

Arthur H. Tully, Director of the Massachusetts Aeronautics Commission, was in Washington recently conferring with CAA airport experts on the plans for terminal buildings and taxi ways. He spent some time with Hervey Law, manager of the Washington National Airport, formerly New England Regional director for the Airport Section of CAA and with Marc Thompson, consulting architect in the CAA Airport Division.

The Massachusetts state legislature appropriated $2,000,000 in 1940 and $4,375,000 in 1943 for the construction of the port, Tully pointed out. Except for funds which the city obtained from WPA and PWA during the depression period, used in developmental work, the State plans, if possible, to finance the entire project from state funds. It was stated that CAA has made available funds up to $500,000 for the Boston airport, but the state has not yet decided whether these funds will be accepted.

Tully stated that Boston is counting heavily on being the principal transoceanic airport on the east coast. Recently an airline authority stated that 1,200 lbs. of payload, through reduced fuel requirements, would be necessary on transoceanic flights originating in Boston instead of New York. On the basis of the last transoceanic fares in effect, this additional payload, if represented by six additional passengers, would increase flight revenues for one crossing by $3,900.

THE WORK REMAINS...
but the Men Change! ★


TODAY'S CRAFT
TAXI NO FASTER THAN A MAN CAN WALK
NEVER TAXI ON THIS RAMP WITHOUT A MAN ON EACH WINGTIP

As we teach Army Aviation Cadets to fly, our duties are constant and our work is unceasing. Only our students are new, for we graduate one class of fine young men after another. The Army sends us these men. The Army supplies the planes. But the clock-like precision of Primary Training for those men is our duty . . . the accurate maintenance of those planes is our responsibility. Our flight instructors, mechanics and other specialists by the hundreds, are steadfast in loyal duty. *The work remains* and the job is being faithfully done by the Civil Contract Schools!

Through this long war even our veteran technicians—both instructors and mechanics—have acquired valuable new experience. This will greatly benefit our services to commercial and private flyers after the war.

SOUTHEASTERN AIR SERVICE

SOUTHEASTERN
AIR SERVICE, INC.
Formerly GEORGIA AIR SERVICE, Inc.

Flight Contractors to U. S. Army Air Forces — Bennettsville, S. C. and Jackson, Tenn.
EXECUTIVE OFFICES — ATLANTA, GEORGIA

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took the position that the Board should not entertain any general presumption in favor of competition on every route.

"We do not question the advantages," they said, "which a competitive economy offers . . . we do question the position . . . that the attainment of the advantages of competition in the further development of our already highly competitive domestic air transportation system requires a parallel service on any route which shows a sufficient traffic to support economically the additional service." They stated further that if presumptions are to be entertained "as substitutes for facts," economic controls established as safeguards may be seriously weakened and the administrative process rendered less able to perform its maximum service to an important national development.

Offer a Suggestion

Then as a suggestion for rectifying this situation, they pointed out that "the rejection of the presumption doctrine would not prevent the Board from authorizing an additional service to secure the benefits of competition on a route if substantial evidence existed to prove that the competition was required for that purpose. Nor would the abandonment of the doctrine affect the validity of the Board's supplemental decision in the North-South California case. That decision, like the decision in the instant case, has legitimate support in considerations other than a presumed public need for competition on the route involved."

Some observers believe that the Board's decision may precipitate a scramble on the part of the airlines to file for new routes where traffic potentials would appear to justify competing service. Counsel for one of the airlines said this would be a natural trend even though the Board made clear, in its majority opinion, that other considerations, besides the advantages of competition, were factors in awarding certificates for point-to-point competition. It was pointed out that in the past the air carriers have generally recognized that each had geographical spheres of operation and, for that reason, parallel competition was generally avoided under what might be termed a "gentleman's agreement."

Writes In Restriction

In granting Eastern a certificate for an extension from New York to Boston, the Board wrote in a restriction which requires Eastern to serve Boston only on flights originating or terminating at points south of Richmond, Va., or west of Charleston, W. Va.

Edward Warner, vice chairman of the Board, wrote a concurring and dissenting opinion in which he expressed the view that United's certificate should have included New York because it is so nearly on a direct line between Boston and Cleveland. Denial of New York as a point on Eastern's new route forces the operation of separate flights from terminal points Boston and New York to any western points to which United might desire to give direct one-plane service from Boston, Warner pointed out.

Rickenbacker Scores CAB Policy on Small Carriers

Communistic Philosophy Is Charged As Freezing Systems of Large Lines

CHARGING that some of the larger airlines that had pioneered the development of air transportation in the United States were being menaced by an alleged communistic philosophy in Civil Aeronautics Board circles, Capt. Eddie Rickenbacker, president of Eastern Air Lines, testifying June 21 in the Great Lakes-Florida route proceeding, brought out into the open again some of the bitterness which is growing over the Big-Little carrier issue.

Large and small carriers and non-certificated applicants engaged in a "no quarter" fight for routes between Miami, Detroit and Chicago as the hearing drew out into three weeks before Examiner Ross I. Newmann.

Rickenbacker dwelt at length on a separate concurring opinion which Board Member Oswald Ryan had written when the Board denied Eastern's application for the Memphis-Greenville route. Ryan said that any great disparity in size between carriers is not conducive to a balanced transportation system. He urged that the small airlines be built up wherever possible.

CAB Calendar

July 17—Hearing on application of Postmaster General requesting award of air mail contracts to Alaska Airways, Inc., and Woodley Airways covering additional points in Alaska. (Docket 1315 et al) (Tentative)

July 24—Hearing on application of American Airlines for Board approval of its acquisition of control of American Export Airlines.

Aug. 1—Prehearing conference, international routes in North Atlantic area. Tentative hearing date Oct. 16.

Aug. 2—Prehearing conference, international routes in South Atlantic area. Tentative hearing date Nov. 1.

Sept. 1—Prehearing conference, international routes, North Pacific area, via Alaska. Tentative hearing date Dec. 13.

Sept. 5—Hearing on application of Braniff Airways and T. E. Braniff for Board approval of acquisition of Areovias Braniff, S. A. (Dockets 1360 & 1373) (Tentative)

Sept. 5—Hearing on applications involving service in Rocky Mountain area,, Ray Wilson, Inc. (Docket 152 et al) (Tentative)

Sept. 11—Hearing on applications in Pacific Coast cases, Oregon Airways, Inc. (Docket 250 et al) (Tentative)

Sept. 15—Prehearing conference, overseas routes, Central Pacific, via Hawaii. Tentative hearing date Jan. 10.

Sept. 18—Hearing on applications involving new and amended routes in the Latin America-Caribbean area. (Docket 525 et al)

Oct. 2—Prehearing conference, international routes, Australia area. Tentative hearing date Feb. 1.

"The adoption of a policy of favoring small carriers would freeze the systems of the carriers who have been the real pioneers and real leaders in the industry," Rickenbacker stated.

"It doesn't make sense to say, as Mr. Ryan implied in the Memphis-Greenville opinion, that two or three investors of a few thousands dollars, plus a hundred workers shall, communist fashion, be converted into the economic equal of thousands of investors of millions of dollars and thousands of workers," he said.

"Is it fair to promote a blind expansion program for all small airlines at the expense of the larger airlines, when the result will be that every original clerk and grease-monkey in the small airlines will be elevated to the position of a department head or executive in these inflated companies; while the thousands of men and women who cast their lots as employes with large, well conceived and well-financed airlines must remain in strait jackets without promotion?" he asked. "So I am here speaking for justice not only for the thousands of men and women in our company whose futures are imperiled by this communistic philosophy, but I am speaking for the thousands of our investors, as well."

Apparently laying the groundwork for the attack on Ryan's position, Rickenbacker had said earlier: "It is no wonder that National's chief stockholder has been able in a few years to realize more than $2,000,000 from an investment of $21,000 in that company. That resulted as a windfall from the Board's generosity to National at Eastern's expense and at the expense of the taxpayers."

Counsel for TWA took issue with Rickenbacker over his claim that Eastern's proposed route would parallel or duplicate existing routes only on 170 of the 1,250 miles involved and that there would be little adverse effect, through diversion of business, on other carriers. TWA sought to bring out that Eastern would parallel TWA from Chicago to Dayton and Chicago to Columbus.

There are six air carriers and three non-certificated applicants in the case. The certificated carriers which put in their cases first included American, Colonial Delta and Eastern. Others to present their evidence were: National, Pennsylvania-Central, South East, State Airlines, Inc., and Virginia Central Airlines. TWA and Chicago and Southern are interveners.

The Department of Justice, through Sadie Arbuthnot, counsel, was taking a part in the proceeding on the monopoly and restraint of trade question. It is the first case that the Department of Justice has had counsel present at most of the sessions.

Routes in the consolidated hearing form a triangle with Chicago and Detroit forming the base and Miami the apex. Louisville, Ky., and Nashville, Tenn., represent the western boundary, Norfolk and other Atlantic Coast cities the eastern border.

LOCKHEED
Service School

Dry run Susie

Around the big training hangar at Lockheed's Service School they call it "Dry Run Susie"—an accurate replica of the P-38 cockpit, with instruments, gauges and controls all in their proper places. A working textbook to show military student mechanics the operating and maintenance characteristics of America's most versatile fighting plane.

Cockpit Without Wings

This cockpit without wings never leaves the ground, but in its operation it exemplifies the kind of practical training taught by Lockheed instructors at the factory school. Each future ground crew man spends time in the pilot's seat learning the instruments of flight. This is but part of the fundamental training he gets. When this 30-day postgraduate course is completed he is an expert P-38 mechanic—ready to follow warplanes into action, wherever they may fight.

A Place in the Future

Lockheed will produce military planes and train the men to maintain them as long as there is a need. Victory must be won before the "air age" of peace can begin. But when it comes, Lockheed will be part of it—building planes, getting them ready to fly and keeping them ready to fly.

LOOK TO *Lockheed* FOR LEADERSHIP

LOCKHEED AIRCRAFT CORPORATION, BURBANK, CALIFORNIA

Six Airlines Give Oral Arguments In Detroit-St. Louis-Memphis Case

COUNCIL FOR SIX airlines took their fight for new and amended routes in the Detroit-St. Louis-Memphis case direct to the Civil Aeronautics Board June 19 in a day and a half of oral argument on the fundamental issues governing domestic air transport expansion.

The recommendations of CAB Examiners Thomas L. Wrenn and F. Merritt Ruhlen under which TWA, Chicago and Southern, American Airlines and Mid-Continent Airlines would be given some new points and new routes, formed the basis for most of the argument.

TWA, through its counsel, Leonard P. Moore, told the Board that if TWA is to be left a sphere of influence, it is in the highly populous and industrial section represented by its application for a route between St. Louis, Detroit and Cleveland, via Indianapolis, Terre Haute, Anderson, Ind., Fort Wayne and Toledo. The examiners had recommended that TWA be given only Terre Haute as a point on its Route No. 2.

Chicago and Southern, one of the carriers which fared best at the hands of the examiners, endorsed the report to the extent that it recommended that C&S be given a Memphis to Detroit route but H. R. Bolander, company counsel, made a plea for Board consideration of the St. Louis-Detroit segment as well. Bolander said the granting of these two segments would go far toward putting C&S on a self-sustaining basis.

Warns of 'Disaster'

Eastern's application for a route between Memphis, Indianapolis and Detroit, via various intermediate points, was recommended for denial by the examiners.

E. Smythe Gambrell, counsel for Eastern, said that if the Board followed the philosophy of its examiners in this case it would lead to debauchery and disaster for the nation's air transport system. He asserted it was apparent that the examiner's had recommended against Eastern because Eastern's application offered too much in the way of improved air service.

Another of the applicants which would receive a moderate extension in routes under the terms of the examiners' report was Mid-Continent. The extension recommended was from Kansas City to St. Louis. The examiners recommended that the portion of Mid-Continent's application for a route between St. Louis and Detroit be denied. John W. Cross, counsel for the carrier, said his company was not arguing for the Kansas City-St. Louis route because of "competition for competition's sake but because it offered one of the best possible examples of a situation which is consistent with recognized theories of sound competition." He also asked the Board's careful consideration of that phase of the application which the examiners had recommended for denial.

The examiners' had recommended complete denial of United's application for a route between Omaha, Detroit and Cleveland, via Kansas City, St. Louis, Indianapolis and Toledo. John T. Lorch, carrier counsel, said that United now flies within 54 miles of Detroit, that the granting of this application would assure as much local service as any of those included in the proceeding and a considerable amount of new service to United's system in the West, via St. Louis.

'Glamorous' Plan Charged

American was recommended for a route between Cleveland and St. Louis, via Fort Wayne, Anderson - Muncie - New Castle, Ind., and Indianapolis. Hamilton O. Hale, counsel for American, said he would agree with opposing counsel that this route would refine American's transcontinental service but he reminded CAB that its recent decisions, which had changed the competitive picture, had brought about a need for American to shorten its cross-country operation to compete with United and TWA, holders of shorter transcontinental routes. Hale also told the Board that American would provide a good local service in the territory and extend the benefits of a through carrier.

Stanley C. Morris, PCA counsel, said he agreed with the examiners' recommendations to the extent that they protected his company from adverse affects, due to diversion. However he asked the Board to "look behind" the applications of some of the other applicants who had failed to show the real purpose of their plans. PCA was an intervener.

In an attack largely on American's expansion plans, Gerald P. O'Grady, counsel for Braniff, an intervener, told the Board that if the number and variety of new services was to be the fundamental and paramount test in awarding new certificates, it might as well substitute the adding machine for its judgment.

"I can best characterize American's plan as a glamorous program to commit assault and battery on every other carrier of the country," he stated.

Allen Dean, for Detroit, and William E. Kemp, for Kansas City, argued in behalf of improved air transport service for their cities. V. Rock Grundman, public counsel, told the Board that local service was the prime consideration and he disagreed particularly with the examiners' as to their recommendations affecting the larger carriers.

Refers to The Bible

Employing a Biblical analogy, Allen Dean, appearing for the Board of Commerce and City of Detroit, told the Civil Aeronautics Board recently that he was grateful for the time which had been allotted to him for arguing the Detroit-St. Louis-Memphis case.

"You have given me 15 minutes. Considering the fact that the reading time of the Sermon on the Mount is only 17 minutes, and the fact that it was an argument for a way of life for hundreds of millions for thousands of years, while I am here merely to argue a transportation convenience and necessity for three million people, I have been quite generously endowed," Dean began.

Dean told the Board that Detroit's east-west rail service is fair. Its north-south rail service is poor. It is, taking it as a whole, a stub-line railroad town and could easily become a stub-line air station without wise treatment by the Board, he declared.

He asked the Board to certificate into Detroit the other two large carriers (TWA and United), either in this or subsequent proceedings, as well as adopt the recommendations of its examiners with reference to Chicago and Southern's new route between Memphis and Detroit.

High Flying Stewardess

Mother isn't there to sew on a button for him so Stewardess Sylvia Rule does it for Sgt. Arthur Dyson of Cornelius, N. C. All United stewardesses now carry sewing kits as part of their flight paraphernalia. Servicemen are their best customers.

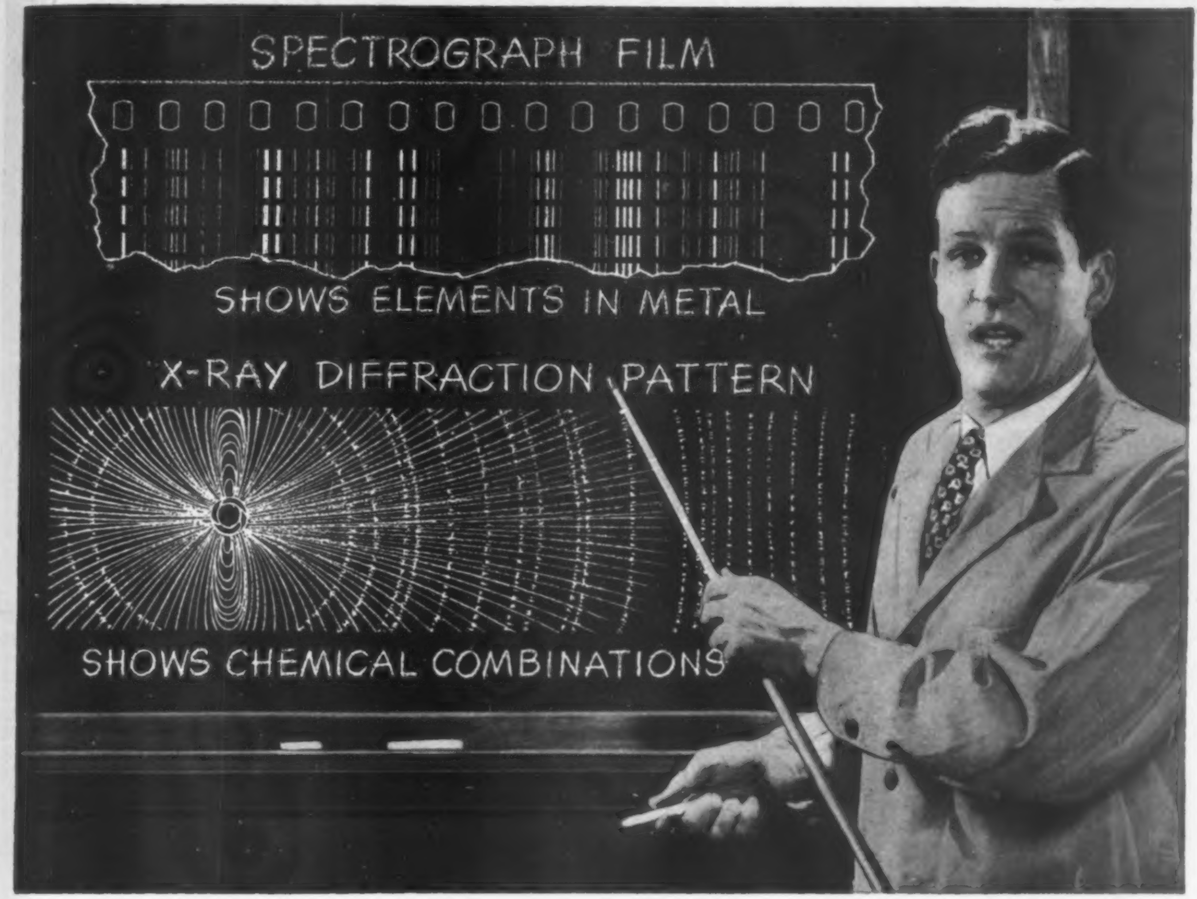
Auto-Cotton Worm Insects Flown to U. S. by Panagra

A shipment of insect eggs recently was flown from Tucuman, Argentina, to the United States and millions of mites known to be enemies of the Alabama Argillacese, scourge of cotton planters, have hatched from them and are busy on southern cotton plantations. The eggs were flown by Panagra and Pan American Airways. Earlier this year the two airlines delivered a priority shipment of Argentine frogs to Florida in an effort to rid the state's sugar cane areas of destructive insects.

Ten Win PCA Pins

Pennsylvania-Central Airlines recently awarded 10-year pins to C. T. Dally, A. A. Rohr, R. O. Smith, J. B. Moore, K. J. Ullom, E. G. Peterson, Al Brooks, Captains H. T. Musick and A. C. Carl, and Vice President J. H. Carmichael.

POINTERS ON ENGINES . . . . *No. 7 of a Series*



Ranger Gets the "Inside Story"

These patterns tell the inside story of metals.

They are "pictures" taken of the physical and chemical properties of the raw materials which make up parts of the Ranger Sixes and Twelves.

Ranger technicians employ them constantly in their control of quality—assiduously in their daily research into new possibilities.

Under the white arc of the spectrograph, the basic elements in a sample of aluminum are revealed—copper, manganese, silicon—and the proportions in which they occur. The X-ray diffraction camera supplements this information. From the sunburst pattern of its pictures can be determined the *chemical form* in which the elements in a given sample are present.

By using another X-ray technique, Ranger technicians can examine the chemical bond between aluminum fins and the steel cores of Ranger cylinders. In the metallurgical laboratories, technicians have found an efficient engine sealing compound; determined standards for synthetic rubbers used in engine construction; unearthed the "whyfors" of metal fatigue.

All this adds up to knowledge. This knowledge, plus the ingenuity of design and dynamic balance, has created in Ranger engines a sleek, efficient source of aircraft power. The kind of power that lends the "touch of tomorrow in the planes of today."

BUY U. S. WAR BONDS AND STAMPS

RANGER AIRCRAFT ENGINES

Division of Fairchild Engine and Airplane Corporation • Farmingdale, Long Island

Burden Says:

'Cities of Under 50,000 Population Should Be Reserved for Feeders'

Official Suggests CAB Halt New Operations into Towns Until Policy is Determined

IN SUPPORT OF his plan for a strong local air transportation system, built with the help of Federal funds, William A. M. Burden, assistant secretary of commerce, has suggested that until its policy is determined, the Civil Aeronautics Board refrain from certificating existing carriers into cities up to 50,000 population.

Burden revealed his views on local and feeder air service at a meeting of the newly organized Feeder Airlines Assn. in Washington, June 15. His statement of the part that the Government might be expected to take in the development of local air service is considered to be one of the most important pronouncements ever made by a government official on this subject.

Commenting on the report of the Local-Feeder-Pickup investigation made by CAB Examiners William J. Madden and Albert F. Beitel, Burden gave tacit endorsement of many of the recommendations and, in at least one case, offered the so-called local-feeder applicant a greater break by suggesting that cities up to 50,000 population be reserved for them, at least until policies are determined. Examiners Madden and Beitel had fixed the population break at 25,000 in their report.

When the Local-Feeder report was argued before the Board two months ago, the existing carriers pounced hardest on the recommendation of Madden and Beitel regarding the 25,000 population limitation. Some of the carriers pointed to the number of cities under 25,000 on their existing routes as proof of their need in developing strong trunk line systems. One Western company said the same population rules should not govern for the East and the West. Another brought out that the cities themselves will have something to say whether planes of transcontinental carriers shall pass over their boundaries, yet not be permitted to stop.

Hence, Burden's statement was of special interest in aviation circles in general, but especially in the air transport industry as it is constituted today.

Cites Warner's Dissent

Stating that he sympathized with the dissent of Edward Warner, vice chairman of CAB, in the Morgantown case in which Warner had advocated that the Board refrain from certificating new points until policy is determined, Burden said: "Every one of these applications that are granted takes a large chunk out of the prospective business of a local airline in that territory. The CAB has recently granted a few such stops, on a permanent basis, and as the airlines receive more planes from the military more of such stops will be applied for by, and may be granted to, the trunk airlines. This could seriously prejudice future local airline operations and it is to be hoped that CAB will avoid it before a definite policy decision is arrived at as to whether trunk or local lines should operate."

There were many in Burden's audience who felt he had made something in the nature of a government policy statement when he suggested the type of operating organization which might serve the needs of local air transportation and when he said that reasonable government assistance must be made available.

'Hard Work Ahead'

"It is going to require the hardest kind of work on the part of the operators and the aircraft manufacturing industry and the most intelligent program of assistance on the part of the Government to develop the only kind of a local airline system which can survive—namely, a system which shows promise of becoming self-supporting in a reasonable period of time," Burden stated.

"Even the most ardent enthusiasts for local airlines, and I count myself as one of them, do not expect them to become a great industry overnight, any more than did the trunk airlines. They will need financial help from the government as did our trunk airlines 15 years ago. But if properly planned and nurtured, they will grow and grow fast.

"It seems to me there are four main lines of attack on the problem. (1) We must reduce the cost of local airline service. (2) We must increase its conveniences to the passenger—which means higher door-to-door speed and great reliability. (3) We must establish the policy that reasonable Government assistance will be available for local services. (4) We must then concentrate the early development of local airlines in areas where they seem likely to become self-suporting in a reasonable period. (This does not mean that experimental operations on a limited scale should not be carried out in less promising areas.)"

Cites Joe Doaks

Observing that Joe Doaks, just back from World War I, had proved that he could and would use the intercity bus and truck, Burden said the rapid growth of the intercity bus business came at a time when it was claimed the private automobile was ruining the railroad passenger business, particularly its short-haul and branch-line business. Actually the private auto and bus merely proved that the railroad train was not a unit adaptable to the small town short-haul surface transport market, he stated.

"It is conceivable that the same may prove to be true of trunk line type of service and equipment as applied to local needs," he said.

"The facts all point to the 'little fellow'. As a practical matter, however, if costs are to be reasonably low, each one must be big enough to operate and finance a good many hundreds or even thousands of route miles of operations in order to keep 10 or more planes flying eight to 10 hours a day on two or more round trips," Burden declared.

Feeder Lines Encouraged

The nation's short haul traffic can be won by the feeder lines, Albert F. Beitel, one of the examiners in CAB's Local-Feeder-Pickup investigation, told members of the Feeder Airlines Assn. at their recent permanent organizational meeting. Beitel observed there has been "no provision by the trunk lines to serve the smaller places." He expressed the hope that pickup operations will be based on mail revenues, and said Congress should enact a special law governing mail compensation.

Beitel, who recently resigned as a CAB examiner, expressed the private view that the Board will some day permit cities to be added to air routes "without the necessity of long, expensive hearings."

He praised the Feeder Airlines Assn. for having given feeders a "well-defined meeting", but warned members against "sitting back on your laurels after you get a certificate of convenience and necessity."

"You must continually give the public efficient service," he said.

Stringer, Kent Get Top Positions In New Feeder Assn.

Harry Stringer, vice president of All American Aviation, was named president of the newly formed Feeder Airlines Assn. at a permanent organizational meeting last fortnight in Washington. William R. Kent, Southair, was elected vice president; Bauman R. Otto, Otto Aviation, secretary; and Joseph J. Mitchener, Jr., Hawthorne Airways, treasurer.

L. to R.—Otto, Stringer, Mitchener

The following in addition to the officers will be on the board of directors:

Mrs. Richard C. du Pont, All American Aviation; Ray Hylan, Hylan Flying Service; E. Cody Laird, Southeastern Air Express; James G. Ray, Southwest Airways; Eugene R. Scroggie, Ryan School of Aeronautics; Nick Bez, West Coast Airlines; and P. C. Wagner, Parks Air College.

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AND FINISH . . .

Specify BENDIX LANDING GEAR!

Bendix Landing Gear—Bendix Pneudraulic Shock Struts, Bendix Airplane Wheels, Airplane Brakes, Hydraulic Master Cylinders, and Power Brake Valves are important members of "The Invisible Crew" of precision equipment which more than 30 Bendix plants are speeding to world battle fronts.

Bendix smooth operating Pneudraulic Struts play an important role in getting heavily loaded, long-range fighting planes into the air and in bringing them safely down again. Whether the run-way is a smooth, concrete strip on the home field, or a shell-potted clearing of an advanced base, Bendix Landing Gear provides maximum protection for plane and pilot. The strength and shock-absorbing power of Bendix struts and the stopping power of Bendix brakes are pre-determined by scientific testing equipment that reproduces actual flying stresses. Bendix landing gear is serving on all types of planes from the smallest trainer to the largest bomber.

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Return of More Planes to Airlines Will Improve Transport Service

GREATLY IMPROVED air transport service, made possible by the return of additional transport planes by the Army to the domestic airlines, is expected in the next few months.

The Army June 20 returned an additional 14 planes which brought the total now available for transport service to 242. The latest allocation, announced by the Civil Aeronautics Board, was: Northeast, 1; American, 3; Braniff, 2; Delta, 1; Colonial, 1; Eastern, 2; PCA, 2; and TWA, 2. All were Douglas DC-3s.

While Air Transport Assn. officials doubted that many more than 10 of the latest 42 to be returned have actually been put back in service, there was abundant evidence that the airlines are completing plans to improve their services as rapidly as possible. PCA has increased from four to 10 its round trip flights between Washington and Norfolk because of the return of three planes during the last few months.

Other airlines have filed applications with CAB to reinstate service on routes which were suspended by war necessity or they have applied for permission to put newly certificated routes into operation. In all recent certifications, CAB restricted the inauguration of new service until the needs of the national defense no longer required a delay in instituting the new service.

Conversion of these Army transports from war to civilian use requires from three to eight weeks, depending on the condition of the plane and the facilities for making the overhaul. Some of the smaller airlines send the returned planes to the Douglas plant in California for overhaul.

Since May 18, the Army has returned 42 planes. Most of them were in the category of those that had been leased by the Army. Only recently have the airlines received planes which the Army had purchased from them. These were planes which the airlines had on order but which never came into their possession because the Army took them as fast as they came off the production line. A few of the leased planes, due to war exigencies, are still in Army service.

Following is a table showing transport planes, all categories, in airline use in 1942 and either in use or returned for use in 1944.

	May 18, 1942	July 1, 1944
American	74	58
United	52	44
TWA	40	36
Eastern	39	28
PCA	18	13
Braniff	15	10
Northwest	14	12
Delta	9	7
Western	12	7
C & S	6	6
Colonial	4	4
Northeast	6	3
Continental	6	4
National	5	4
Mid-Continent	9	4
Inland	5	2
Total	314	242

Hunter Says Northwest To Move Headquarters If Tax Decision Stands

President Croil Hunter of Northwest Airlines has declared that unless the airline state tax situation is straightened out, Northwest may be forced to move its entire headquarters from Minnesota to a state which will tax on an apportionment basis.

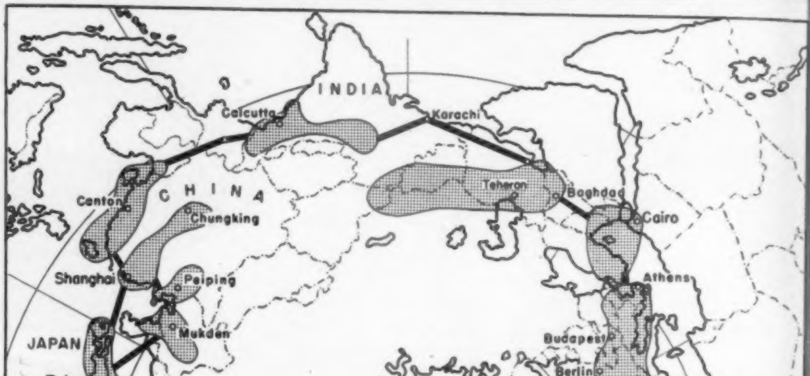
Hunter, who so far has remained silent on the recent Supreme Court decision upholding Minnesota's action in levying a 100% ad valorem tax on Northwest's entire fleet because its "home port" is in the state, in Minneapolis, said that one of three things must be done: (1) The Supreme Court decision must be reversed, (2) Congress must take action, or (3) Minnesota must pass legislation so that it taxes only part of the NWA fleet. If none of these things is done, NWA will move to another state, he said.

Hunter also revealed that NWA plans to ask the Supreme Court for a re-hearing on the tax case.

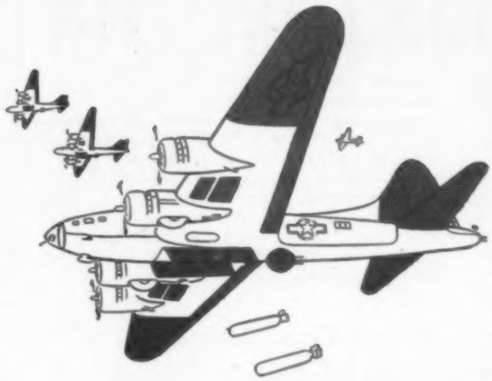
PAA Cargo Unit Gets Job

The cargo unit at Pan American Airways' North Beach has been assigned the job of loading and unloading cargo for all aircraft operated by PAA's Atlantic Division at North Beach. Previously, four departments handled air cargo at the airport—the airport office of the operations department, airport porters of the purchasing department, the beaching crews of the maintenance department, and the cargo unit. The assignment has been made "for greater efficiency and expediency."

TWA's Proposed Round-the-World Route



Transcontinental and Western Air has filed an application with the Civil Aeronautics Board for this round-the-world air route. The application proposes TWA service from Seattle, San Francisco, Chicago, Detroit, Washington, New York, and Boston to 10 foreign traffic producing areas in which the United States has strong commercial, diplomatic, and national defense interests. These areas are shaded in the above map.



BRIGGS REPORTS

on One Billion Dollars in War Orders

—and how the money is being spent

During peacetime, Briggs Manufacturing Company is the Nation's largest independent automobile body manufacturer. In the war Briggs is devoting its peacetime skill to making bodies and parts for medium tanks and aircraft; also, bomber turrets, droppable gas tanks and non-ferrous castings.

Briggs war orders total approximately $1,000,000,000. This money has been spent or is being spent as indicated in the box shown herewith. Percentages are based on distribution of Briggs 1943 sales dollar.

53.6%	to about 40,000 employees for wages and salaries.
0.2%	for executive salaries.
32.1%	to some 2,000 subcontractors for materials, supplies and assemblies.
1.9%	to stockholders for dividends.
9.2%	for taxes.
1.2%	for depreciation.
1.2%	for reconversion expenses and other costs arising from the war.
0.6%	left in the business.

In 1943 Briggs did twice as large a dollar volume of business as it did in an average peacetime year. In 1943 Briggs delivered double the number of tank hulls delivered in 1942. In the same year Briggs delivered to the U. S. Army and Navy more than 22,500,000 pounds of airplane sections, as compared with 7,000,000 the year before. This included almost twice as many bomber fire-power turrets as in the previous year. Total shipments to date of airplane sections by Briggs exceed 45,000,000 pounds.

Earnings by Briggs hourly paid employees in 1943 averaged $3,159.00. On December 31, 1943 there were 39,312 people on the Briggs payroll, of which 21,737 were men and 17,575 women. This is 48% greater than on December 31, 1942 when Briggs payroll was 26,401 people.

In the first five months of 1944, shipments of airframe sections, by Briggs, were at considerably greater monthly rates than during any other months since the war began. Production of tank hulls was almost equal to the 1943 rate. Deliveries of auxiliary gas tanks, for the first five months of this year, were 7 times the total for 1943, and shipments of aircraft fire-power turrets were at a rate almost twice that of last year.

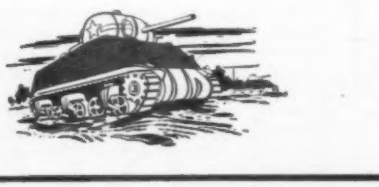
Unless very extraordinary developments take place, Briggs 1944 war business should be equal to, or exceed, its record 1943 year.

During the war, Briggs has shown that experience in manufacturing good automobile bodies, plumbing ware and non-ferrous castings has enabled it to turn out good "bodies for bombers, fighters, tanks" and other war requirements. Briggs is glad that it has been able to play an important part in the Nation's war effort. All of its facilities and energies will continue to be available to the Armed Forces until Victory has been won.

However, when Victory does come, Briggs is prepared to go about the job of reconversion with the same dispatch and intensity that it applied to the preparation for war, and, if it is allowed to do so, can go back into at least some peacetime production quickly.

W. O. BRIGGS
Chairman of the Board

W. P. BROWN
President



BRIGGS
MANUFACTURING
COMPANY
DETROIT

Single 'Community Airline' Urged by PAA In Annual Report; Earnings Down in 1943

In its annual report for 1943, issued June 26, Pan American Airways urges the creation of a single "community airline" to engage in international air transportation for the United States.

The company reported that it continues to operate 82,000 of the 98,582 route miles operated commercially before Pearl Harbor and stated that its new income for 1943 was $1,929,764, compared to $1,984,438 and $2,256,317 in 1939 and 1940, respectively, and $3,361,251 and $3,780,015 in the war years of 1941 and 1942.

In the opening section over the signature of Juan T. Trippe, president, the company's international position is described as follows:

"Your company's position has been that in international air transport, as in international telecommunications, our nation's best interest would be served by concentrating the effort of the United States behind a single American international operation, strong enough to compete on even terms with the great foreign flag air transport monopolies created by the other principal trading nations.

'All Interests Contribute'

"This operation would take the form of a community company in which all American transportation interests able to contribute would be permitted to participate under an organization plan approved by the Government. Your company has considered that the policy of the Government on an issue of this importance must be determined, not by the interests of any company or group of companies, but by what will be best for our country as a whole."

In the report, which contains illustrations and charts, are copies of letters from General H. H. Arnold and Rear Admiral A. W. Radford in recognition of the wartime contract services being operated by PAA for the Air Transport Command and the Naval Air Transport Service.

Salient achievements in 1943 included:

A total of 643,936 passengers were carried, compared with 492,197 in 1942.

A total of 84,545,010 pounds of freight was carried compared with 26,459,057 pounds in 1942.

Out of a gross business of $126,000,000 for the year, $84,000,000, of 66%, represented payments for military transport, construction and related services performed on contract.

The 82,000 miles of routes currently being flown are for regularly scheduled passenger, mail and express services in 47 countries and colonies.

50 Airports Conditioned

Some 50 airports have been constructed or expanded in 15 countries since the start of the airport construction program for the U. S. Government.

Pan American flight crews have made more than 7,500 transoceanic crossings including 700 special flights and missions.

For the Air Transport Command over 3,800 trans-Atlantic crossings have been made and 22,500,000 plane miles flown.

Eighty special flight crews of the Africa-Orient Division are flying 1,100,000 miles a month between the U. S. and India, carrying cargo and passengers at the rate of 170,000 ton-miles a day.

Some 3,000 flights in the Pacific area were made in 1943 for the NATS.

Operating revenues were: Air mail (U. S. and foreign), $6,806,710; passenger revenue, $21,530,789; express and other transportation revenue, $7,212,669, totalling $35,550,168. The balance before provision for taxes on income was $3,718,896, and the consolidated net income of $1,929,764 included $1,042,218 net income of foreign subsidiaries.

Braniff Court Hearing In Essair Case Delayed Until Sometime in Fall

The petition filed by Braniff Airways, Inc. asking the Court of Appeals, District of Columbia, to set aside the order of the Civil Aeronautics Board by which Essair, Inc. received a temporary air transportation certificate for a route in Texas, will not be given a hearing until fall.

The action was brought by Braniff against CAB and 12 points of error are assigned, with the principal contention hinging on a charge that there was no adequate showing that Essair was "fit, willing and able" to operate the service. Braniff claims that the Board's decision with reference to the applicant's financial fitness was based on evidence which had been taken nearly two years before.

Counsel for both parties agreed by stipulation that Braniff should file its brief by Aug. 1 and the General Counsel's office, acting for the Board, shall file its brief and answer by Sept. 11. Sometime later, the case will be set for hearing.

Meanwhile, Essair was going ahead with its plans to operate a route between Houston and Amarillo, via Austin, San Angelo, Abilene and Lubbock. The certificate will expire Dec. 31, 1946.

Essair, with the exception of All American Aviation, Inc., is the first company to be certificated in domestic airline service outside of the Grandfather clause of the Civil Aeronautics Act. The Board stated it was granting Essair's application as an experiment in local and feeder operations.

A Prophet Once, But Not Twice

O. M. "Red" Mosier, vice president of American Airlines, is getting plenty of national attention and pats on the back because he picked June 6 as the invasion date. Some inconsiderate rascal—the dog!—recalled, however, that on June 5 Mosier would have sold his date for a song.

To make things worse some bird telephoned Mosier immediately after the B-29 raid on Japan had been flashed on the news printers and inveigled Mosier into making a bet on the first raid by the B-29s on the Nips on their homeland. Not knowing of the raid, Mosier chose Aug. 17 and then learned the raid had just taken place. No bets. (No prophet, either.)

Recent CAB Orders Affecting Air Carriers

2887, Doc. 570 et al: Severs Doc. Nos. 1113 and 1205 of National Airlines and Doc. 1189 of Air Transport from consolidated proceeding and dismisses applications on applicants' request.

2888, Doc. 1108: Dismisses application of National Airlines at carriers request.

2890: Requires Eastern and Panagra to show cause why approval of interlocking relationship involving A. Garni, a director in both companies, should not be revoked.

2894: Approves agreement between Braniff Airways and Compania Mexicana de Aviacion, S. A. for working arrangement for landing Braniff planes at Nuevo Laredo, Mexico.

2895: Suspends passenger service on Route 29 until further notice of the Board.

2897: Permits PCA to inaugurate non-stop service between Clarksburg, W. Va., and Pittsburgh, between Morgantown, W. V. and Bristol, Tenn.

2902, Doc. 1083: Approves acquisition of Northeast of Mayflower subject to certain conditions.

2903, Doc. 13-401-B-1: Authorizes Northeast and Eastern to provide service between New York and Boston, subject to certain restrictions, authorizes United to operate between Cleveland and Boston and TWA between Pittsburgh and Boston. **2904** to **2909**, incl. Approves interlocking relationships of several Pan American Airways Corp. officials by virtue of dissolution or consolidation of certain companies in PAA's system.

2915: Partly rescinds service suspension order regarding service between Muskegon, Mich. and Chicago by PCA.

2916: Authorizes National to inaugurate service to West Palm Beach, Fla., on Route No. 31.

2919, Doc. 1220: Dismisses application of Rocky Mountain Motor Co. on request o applicant.

2920, Doc. 1266: Dismisses application of R. E. Guerin Trucking Co. on request of applicant.

2921: Authorizes Eastern to serve Lake Charles, La., on Route 5 through Lake Charles Army Air Base.

2922: Authorizes Eastern to inaugurate non-stop service between Indianapolis and Nashville, Tenn. on Route 10.

2933: Authorizes Eastern to inaugurate non-stop service between Lake Charles, La. and Houston and between Lake Charles and New Orleans on Route 5.

Solomon Resigns

S. J. Solomon, chairman of the Airlines Committee for United States Air Policy, has submitted his resignation effective July 15. Now chairman of the board of Northeast Airlines, Solomon was chosen to head the committee when it was organized almost a year ago. He gave as his reason for resigning the fact that the job of organization which he undertook has been completed. There are now 16 airline members, the 17th, Inland, now having been merged with Western Air Lines.

They Fly, Yet Don't Fly

Ten thousand bees recently flew from Seattle to Fairbanks, yet not a wing fluttered. They were aboard a Pan American Airways plane and were "quartered" in fine-screen cages, constructed to provide a maximum of fresh air and feeding facilities. The bees were delivered to a Fairbanks attorney, whose hobby is bee-raising.

HOW FAR WILL YOU CRUISE

in your Post-War Plane?

✓ Check Your Range — 500 mi... 750 mi... 1200 mi...

YES, it's just as easy as that to check your answers on our popular Aircraft Quiz. We want to say more about this Quiz, but first let us tell you what bearing it will have on your post-war traveling.

You'll cruise high, wide and handsome if you cruise in a Bellanca, and you'll easily outdistance many of your flying friends. Your week-end and holiday trips will be interrupted by few if any re-fueling stops. You'll go from point to point on the map with the greatest of ease.

Of course, your Bellanca plane cannot be delivered until after our war work is completed—and we mean, *completed!* But meanwhile, we invite you to do some hard thinking about *your own* needs for peacetime air travel. And here is at least one way your thinking can take a line of constructive action. Get your copy of our Aircraft Quiz and answer the many vital questions we have listed for our friends.

Cruising range is only one of these questions, but an important one. We've had a lot of experience with *range.* Remember, it was a Bellanca that flew first from New York to Berlin non-stop—first bridged the Pacific between United States and Tokyo in one hop! Other provocative Quiz questions touch on capacity, speed, engines, construction, types, uses, price and those many essential factors which help you to determine *what* aircraft you should select and *why.*

Let us mail you this interesting and useful Aircraft Quiz. Send us your name and address now, while you think of it! . . . Bellanca Aircraft Corporation, Dept. S-5, New Castle, Delaware.

BELLANCA

Keep on Buying
U. S. WAR BONDS

Airline Commentary

Some of the airline boys have told us recently that the priority system, which seemed to be working so well, is being abused again. . . . They claim there are numerous people riding with priorities who aren't entitled to them. . . . We're just reporting this, not substantiating it. . . . Do you know of any abuses? . . . If so, we'd like to know. . . . We heard one airline man praise the priority system on express. . . . It's helping to get the important stuff through. . . . But he also said that many shippers who are entitled to priorities aren't getting them, either because they don't take the trouble, or because they aren't familiar with the system. . . . He told us he'd like to see this system continued for some time after the war. . . . "A shipment of machine parts is a darned sight more important to the reconstruction of the world than a shipment of flowers," he pointed out. . . . And that's a hard point to argue. . . . Maybe he's got something. . . .

●

One of the busiest spots in Washington, we find, is the office of L. Welch Pogue, chairman of the Civil Aeronautics Board . . . And we want to toss an orchid to Marian Newman, Pogue's capable secretary, who has to keep the wheels going around . . . We dropped in to visit with Miss Newman, whom we have known for some time, and the phone on her desk rang about every 15 seconds . . . It seems that everyone wants to see the chairman, who just hasn't got enough time to see everyone . . . So if you should happen to want to see him, and Miss Newman says no, she isn't stalling you off (if your mission is important, that is) and she'll make every effort to get you in eventually . . . So give the little lady a break . . .

●

This may be an old and well-worn subject, but why doesn't somebody do something about the "tipping" evil at airports? . . . We aren't a cheapskate, but a porter who carries your bag all of 10 feet and then stands around with his hand out, is very much out of place in an industry as progressive as air transportation. . . . We've been on a trip recently and were more impressed than ever by this "evil." . . . Along the route of our trip we did a little checking and were surprised to discover that in many places it is necessary for the airlines to pay these porters. . . . In one city, for example, where we're sure the cost of living isn't unusually high, one airline pays its porters $108 a month just for wrestling a few suitcases and doing a few odd jobs between schedules. . . . This whole subject is one that everyone talks about but nobody does anything. . . . Why doesn't somebody do something? . . .

●

We flew on American Airlines recently, and during the trip the pilot and first officer sent back a flight report . . . You've all seen these reports, telling you the altitude, estimated time at destination, speed, etc. . . Then there's a place for "Remarks," where the pilot generally writes that "at 5:15 you will see on the left of the plane Podunk State Park" . . . Well, we received this particular flight report, casually glanced at "Remarks," and were startled to see this little gem staring us in the face:

"We've tried to accommodate you in a kingly style
"And sincerely hope you've enjoyed every mile."

It seems that First Officer D. M. Regan was responsible for this masterpiece, but that Capt. E. Phillips also had been in a composing mood . . . "They've been trying to outdo each other for a week now," said Miss Grytness, the stewardess . . . Gee whiz, airline pilots are poets yet! . . .

●

Northwest Airlines decided recently that it would be a good idea to have more complete data on each employe. . . . So it wasn't long until each employe received a questionnaire asking for his complete life history. . . . Remy Ludwig, veteran NWA district traffic manager in Milwaukee, who has been with the company for several years, went to a great deal of trouble finding out what county he was born in, etc., etc. . . . With a sigh of relief he mailed the questionnaire in to the home office. . . . Imagine his surprise and chagrin when, a couple of days later, he received a very short, formal note from headquarters saying, in effect, that, "We have considered your application carefully, but are sorry to inform you that we do not have an opening for you at this time." . . . He didn't take them up on it, however. . . .

ERIC BRAMLEY.

Traffic

CHICAGO AND SOUTHERN AIR LINES flew 15,053,554 revenue passenger miles during the first five months of this year, an increase of 11.63% over the same 1943 period when the airline flew 13,302,411 revenue passenger miles. A total of 33,083 revenue passengers was carried compared with 31,608 for the same period of 1943, an increase of 4.50%. The total number of revenue passengers carried in May was 8.80% over May, 1943.

TRANS-CANADA AIR LINES reports that May was the busiest month in the history of its Toronto station. A 34% increase in passenger revenue over the corresponding month of last year was recorded. Traffic for the first five months of this year is 37% ahead of the same period of 1943.

PAN AMERICAN AIRWAYS reveals that its flight crews completed a total of 7,306 ocean crossings from Dec. 7, 1941 through April 30 last. The total includes 3,649 ocean crossings for ATC, 2,866 for NATS, 746 over civil routes, and 45 special missions. More than half of PAA's wartime flights have been across the Atlantic.

NATIONAL AIRLINES, reports that its planes carried 105 per cent more revenue passengers during May than were carried in May, 1943, or 11,189 as against 5,453. NAL's 3,253,408 passenger-miles flown in May show an increase of 97 1/3 per cent over the 1,648,842 passenber-miles flown in May a year ago.

AIR EXPRESS DIVISION, Railway Express Agency, reports that shipments handled through La Guardia Field during May averaged more than 1,800 a day, and marked up a 27.8% increase over the same month of last year. Shipments handled for the domestic airlines totaled 54,753, compared with 42,854 in May, 1943. Gross revenue exceeded $256,000 for the month, 22% more than last year.

UNITED AIR LINES carried almost as much airmail during the first five months of this year as it did in all of 1942. The total was 6,508,695 mail ton-miles, 95% of the 6,827,977 mail ton-miles flown in 1942. United completed its 1800th successful scheduled flight for the ATC over Alaskan terrain on June 17.

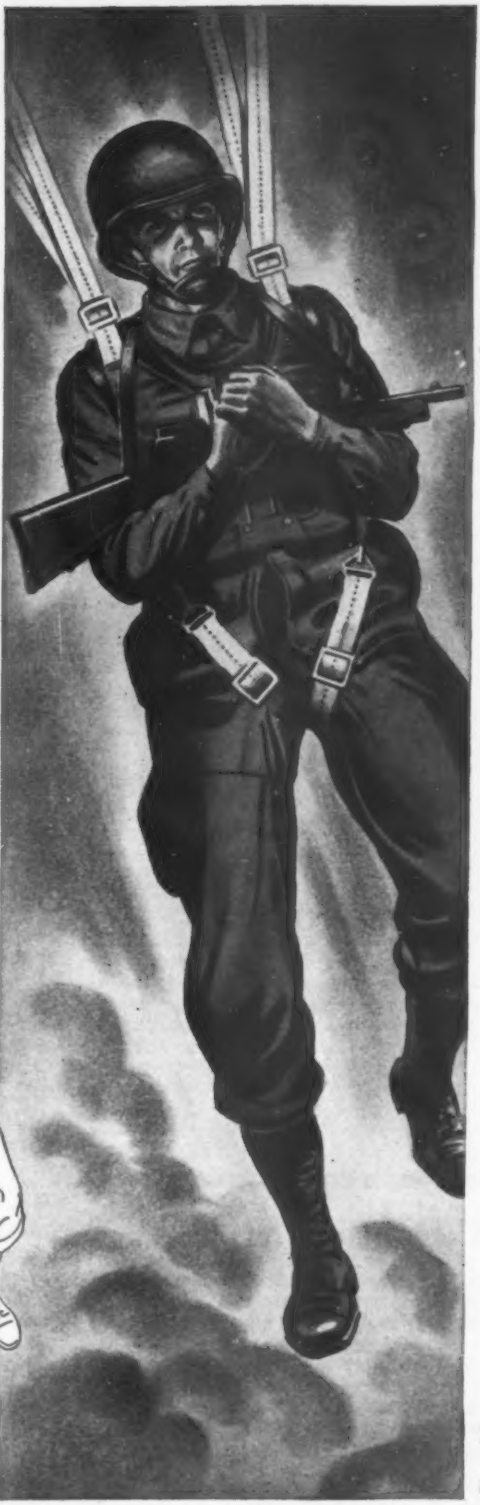
CANADIAN PACIFIC AIR LINES carried 9,592 passengers during May, an increase of 63% over the corresponding month of last year. Freight moved during May totalled 461,483 lbs., an increase of 24%. Mail totalled 105,600 lbs., a decrease of 49% from the previous year.

CONTINENTAL AIR LINES flew 2,516,283 miles during May and recorded a 52% increase in passenger revenues to establish an all-time high in the airline's nearly 10 years of operations. The May total was 53% above the 1,663,734 miles flown in April.

Radio Too Clear!

A student-pilot in a Link trainer experiences all of the sensations of flight—except one. Through earphones, the simulated radio range signals come to him clear as a bell, in fact too clearly. A radio technician for Delta Air Lines, named Jack Kramer, has injected realism into the Link by installing a radio receiver which blends actual static with the manufactured range sounds, and so completes the illusion of blind flying. Kramer has received a $25 war bond from Delta.

TODAY... AND IN THE DAYS TO COME



Out of the war's testing cauldron has come no finer life saving device than the Switlik, American-designed and thoroughly proven **SAFE-T-CHUTE**. ☆ ☆ ☆ ☆ Born of the many years of practical experience to Stanley Switlik and developed to its present high standards through the genius of Switlik Engineers, there can be no better testimony to the efficiency of **SAFE-T-CHUTE** than the praise of the famous Caterpillars, that group of airmen who have bailed out but who go back "upstairs" with confidence, because of their faith in their **SAFE-T-CHUTE**. ☆ And when the war is won, rest assured that Switlik resources will be ready for other needs. Just as our output today goes to meet War's demands so will the Switlik Safety Products tomorrow play an important part in keeping the peace. ☆ ☆ ☆ Wear a **SAFE-T-CHUTE** whenever you take to the air. It is truly the "Lifeline of the Skies." ☆ ☆ ☆ ☆ ☆ ☆ ☆

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Airline Personnel

Hayner

Spoeri

Executive

Hollis Thompson, vice president of American Airlines and president of American Airlines de Mexico, has been placed in charge of the company's entire route expansion program calling for the addition of 5,000 miles to its domestic routes and 3,630 miles to its international routes.

William A. Straith has been appointed president and general manager of TACA Airways Agency to fill the vacancy created by resignation of **Robert L. Reed,** who remains vice president and general counsel.

Lt. Col. Robert F. Six, who has been on leave from his duties as president of Continental Air Lines since Sept. 1, 1942 has returned to CAL following his discharge from the army due to physical disabilities incurred while serving with the Air Transport Command.

Financial

Alberto Sanchez Llorente has been appointed assistant treasurer of Aerovias Braniff, S. A., Mexican airlines controlled by Braniff Airways.

J. C. Brawner, formerly chief of the Rates Section of the Rates and Audits Division of the Economic Bureau of the Civil Aeronautics Board, has been named assistant to the president of National Airlines and will be assigned to matters of finance and development.

Traffic

Vera Murray is the first woman to head a traffic office for Delta Air Lines. She has been named acting DTM at New Orleans.

Bates

Ruprecht

Demme

Brawner

Kenneth M. Bates has been named DTM for United Air Lines at Toledo, and **Herbert E. Ruprecht** has been appointed acting DTM at Philadelphia.

Eleanor Hayner, formerly chief reservations representative for TWA in New York, has been appointed manager of the TWA ticket counter in the New York Airlines' Terminal.

Don Mandell, Pennsylvania-Central Airlines station manager in Birmingham, has been named manager of the reestablished PCA station in Chicago. **Ken Sorby** is being transferred from Morgantown, W. Va., to Birmingham, and **E. O. Alvord** of Pittsburgh will succeed Sorby. **John Klink, Jr.,** assistant station manager in Akron, is the new station manager in Flint, Mich.

India Now and Post-war

To manufacturers of aircraft, aero engines, aeronautical equipment, accessories including aviation, radio, aerodrome lighting and kindred lines The Asian Air Associates—a Company well-founded and financially sound—are prepared to consider the exclusive agency for or sub-licenses to manufacture—their manufactures in British India. The Asian Air Associates are planning a chain of maintenance stations at the major air ports in India which places them in an unique position to represent Air Lines and undertake the maintenance of aircraft.

Bank and other references submitted.
Communicate direct to:

THE ASIAN AIR ASSOCIATES
Wavell House, 15 Graham Road - Ballard Estate, Fort, Bombay

Scroggie

Murray

Public Relations

Fred B. Foulk, director of public relation for Panagra at Lima, Peru, has resigned and returned to this country.

Robert E. Demme, former associate editor of Skyways Magazine, has joined the public relations staff of American Export Airlines. He will edit the company's Transatlantic Air News.

Robert E. Burgess, a night editor in the Associated Press Washington Bureau and former war correspondent in the Pacific, has joined the publicity staff of Northwest Airlines.

Miscellaneous

T. W. Spoeri, former personnel manager of the International Resistance Co., Philadelphia, has been appointed to a similar position with All American Aviation.

Emory Johnson, former United Air Lines and Aircraft Accessories, Inc., Washington manager, has been named director of the air express airline division of the Air Transport Association.

Maj. Erskine Girard, former American Expressman well known in Eastern airline circles, has been transferred from the Air Transport Command to the 9th Air Force in England.

R. F. Ahrens, director of personnel for United Air Lines, has been elected chairman of the personnel committee of the Air Transport Association, succeeding **Victor Vernon,** director of personnel for American Airlines.

Operations

Capt. M. B. Barclay of Trans-Canada Air Lines has been appointed operations superintendent of the Canadian trans-Atlantic service. Trans-Canada's **Capt. G. W. McLaren** completed 10,000 hours of flying April 20, it has just been announced.

Eugene R. Scroggie, former chief of the General Inspection Branch of CAA's Sixth Region, and at one time operations manager for All American Aviation, has been appointed to direct operations of the projected Ryan Airlines.

Gilbert K. Brower, chief materials engineer for American Airlines, has been appointed vice chairman of the Coordinating Lubricants Research Committee sponsored jointly by the American Petroleum Institute and the Society of Automotive Engineers.

Buy War Bonds – to Have and to Hold

Hurricane in Harness

Poised on knife-edged supports, the ten-foot scale model of a Boeing Flying Fortress rides the screaming gale. Engineers, tense at their control panels, watch and check every reaction of the sturdy airplane. In an hour they can learn more about the flight characteristics of a new wing or a new tail design than would be revealed in months of actual flying.

The Boeing wind tunnel, in the recently dedicated Edmund T. Allen Memorial Aeronautical Laboratories at Seattle, is capable of speeds in the 700-mile-an-hour range, approximating the speed of sound—four or five times faster than a Gulf hurricane or a typhoon.

A gigantic 16-bladed fan, 24 feet in diameter, funnels the air into the "throat" of the test section. Power from a rated 18,000-horsepower synchronous electric motor is transmitted to the fan through the largest magnetic clutch ever built.

But speed is only one of the features that make this huge structure an exceptional contribution to the advancement of aeronautical science.

Boeing-designed balances of extraordinary accuracy measure the airplane model's performance. The forces of lift, drag, yaw, pitch and roll at any given air-speed are registered on instruments that record variations from fractional ounces to 10,000 pounds.

The tunnel provides greater accessibility, utility and ease of operation than has ever before been possible. Instantaneous automatic recording of all data in numerical form permits immediate computation and analysis.

• • •

The Boeing wind tunnel is now ready to help speed the day of Victory. When the war is won, it will mean much to increased comfort, speed, safety and economy in air transportation. As in the past, Boeing leadership in design, engineering and manufacturing will set the pace in aeronautical development of peacetime aircraft products.

DESIGNERS OF THE FLYING FORTRESS • THE NEW B-29 SUPERFORTRESS • THE STRATOLINER • TRANSOCEAN CLIPPERS **BOEING**

Route Applications Before CAB Involve Total of 1,211,703 Miles

APPLICATIONS now on file with the Docket Section of the Civil Aeronautics Board involve a total of 1,211,703 route miles according to a tabulation made for *American Aviation* on applications of record June 15.

Computations made by Mrs. Katherine Williams, chief of the Docket Section, reveal that there are requests for 694,833 miles for Domestic routes and 516,870 miles of foreign and overseas routes.

The renewed activity which started early last month through filings immediately preceding some of the recently scheduled prehearing conferences continued apace into the last half of June with 20 route applications filed between June 12 and June 24 inclusive.

A brief summary of the applications filed during this period follows:

American Airlines, Inc.

This carrier filed an application asking that its certificate for Route 30 be amended to extend from the present terminal point Fort Worth to Houston, Texas. (Docket 1462)

Eastern Airlines, Inc.

Applicant filed that its certificate for Route 5 be amended so as to include Austin, Tex., as an intermediate point between Houston and San Antonio. (Docket 1463)

Essair, Inc.

This company, newest of the domestic airlines, filed an application requesting that its temporary certificate for Route 64 be amended as follows: beyond Abilene, Tex. to a new co-terminal, Dallas, via Breckenridge, Mineral Wells and Fort Worth; beyond Abilene to a new co-terminal, Oklahoma City, via Wichita Falls, Tex. and Lawton, Okla.; beyond Abilene to a new co-terminal Midland, via Sweetwater and Big Spring; beyond Austin to new co-terminal San Antonio; further that the certificate be amended to include Brownwood and Plainview as intermediate points, with authorization to omit San Angelo, Tex., as a stop on any schedule that Brownwood is served. Applicant asks to carry passengers, property and mail in Lockheed 10-A planes. (Docket 1446)

Lamsa

This Mexican subsidiary of United Air Lines, Inc. filed for air transport routes to the United States through the State Department. The application was filed by William Taylor, president and general manager of LAMSA. The Mexican company requested a permit to carry passengers, property and mail over the following routes: Cananea, Sonora, Mexico to Los Angeles, via Nogales, Ariz. and from Cananea to Los Angeles, via Nogales and Phoenix. (Docket 1441)

Western Air Lines, Inc.

This carrier filed for applications for new air transportation routes as follows: Between Denver and Minneapolis, via Fort Morgan, Sterling, North Platte, Norfolk, Sioux City and Mankato (Docket 1449) between Cheyenne and Denver, via Greeley (Docket 1450) between Sheridan, Wyo., and Rapid City, S. D., (Docket 1451) and between Huron, S. D., and Chicago, via Mitchell, S. D., Sioux City, Fort Dodge, Waterloo, Dubuque, Ia., and Rockford, Ill. (Docket 1452)

Western also for several routes in Wyoming and Colorado which hitherto had been applied for by Inland Air Lines. Several weeks ago, the Board approved Western's acquisition of the Inland. Routes asked for are: Billings to Casper, via Cody, Greybull, Worland; Billings to Rock Springs, via Lovell, Greybull, Worland, Thermopolis, Riverton, Lander, Rock Springs, Rapid City to Rawlins, via Casper; Rawlins to Jackson, via Lander; Denver to Rock Springs, via Boulder, Ft. Collins, Cheyenne, Laramie, Rawlins; Lander to Casper, via Riverton. (Docket 1458)

Cowell Coach Line, Inc.

This applicant of 4 Cohannet St., Taunton, Mass., filed for a helicopter route between Providence, R. I., and Boston via many intermediate points. The applicant also requests permission to operate between all cities within 25 miles of points named on its route and all points in Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Delaware, Pennsylvania, Maryland and District of Columbia. Ashley B. Childs is treasurer of the company. (Docket 1443)

Grays Harbor Lines

This company of Seattle, Wash., filed a new application which segregates the foreign from the domestic phase of its proposed air transport service. The proposed route, involving foreign service, is from the main terminals at Aberdeen and Hoquiam, Wash. over a circle route to Puget Sound, Tacoma, Seattle, Bremerton, Everett, Port Townsend, Anacortes, Vancouver, Victoria and Port Angeles. (Docket 1440)

Interstate Transportation Co. Inc.

Applicant of 4 Cohannet St., Taunton, Mass., filed for helicopter routes between Providence, R. I. to Provincetown, Mass., Providence to Boston, via a large number of intermediate points. The applicant also asked permission to fly in non-scheduled service from within 25 miles of each point named to any point in Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Delaware, Pennsylvania, Maryland and District of Columbia. Harold J. Dooley is treasurer of the company. (Docket 1442)

Clarence W. Ludwig

Applicant of Sky Harbor Ludwig Airport, St. Petersburg, 1, Box 527, Fla., filed for five routes as follows: a circular route, Tampa to Tampa, Ocala to Tampa, Orlando to Tampa, Arcadia to Tampa and Ft. Myer to Tampa, all via various intermediate points. Applicant asks to carry passengers, property and mail, and would use single engine aircraft which is now in his possession. (Docket 1447)

Midwest Airways, Inc.

This company of Box 147, Cudahy, Wis., asked for a route from Marquette, Mich., to the co-terminals of Port Arthur-Fort William, Ontario. Applicant requests a certificate to carry persons, property, mail and express and that this application be considered along with its request for routes in Docket 1272. (Docket 1453)

Lyon Van & Storage Co.

Applicant of 1950 S. Vermont Avenue, Los Angeles 7, Cal., a company engaged in the surface transport of household goods, filed an application for a certificate to transport, by air, household and related goods and aircraft parts, between points and places in continental U. S. over irregular routes. Applicant asks the Board to exempt it from provisions of Clauses 3 and 4, Paragraph D of Part 238 of the Economic Regulations which requires the naming of fixed points and terminals. The company lists total assets of $2,530,000, including cash on hand in the bank of $104,258 and accounts receivable of $1,228,149, fixed assets of $938,490, investments and advances of $145,319, and other assets of $35,497. Current liabilities amount to $1,397,946, mortgages payable of $28,811, capital and surplus of $974,172, tax and dividend account of $450,058. Frank A. Payne is president of the company. Conventional type of aircraft will be used. (Docket 1459) The company filed another application for non-scheduled operations between points in the U. S. and Mexico, Canada and Alaska. (Docket 1460)

Schoenberg

Milton, Leonard and Hyman Schoenberg, of 333 Waterman Avenue, East Providence, R. I., asked for a route between Boston and Provincetown and between Providence and New Bedford for the carriage of persons, property and mail. The applicant proposes to integrate the air service with bus operations. (Docket 1444)

Spartan Airlines, Inc.

This company through Maxwell W. Balfour, president and general manager, 6900 East Apache St., Tulsa, Okla., filed for air transportation of persons, property and mail over 11 routes, between the following termini: St. Louis and Kansas City, Kansas City and Shreveport; St. Louis and Wichita Falls, Tex., Amarillo, Tex. and Texarkana, Ark. (2 routes). Shreveport and Houston; Wichita, Kan. and Dallas, Kan., El Paso and Shreveport, Shreveport and Brownsville, Fort Worth and Brownsville and Houston and Dallas. Applicant would use twin-engine Beechcraft, 18-S, in passenger operations and Spartan Executives in mail and property operations until the Board should approve the latter plane for passenger operations. The company now has three Spartans under lease from Spartan Aircraft Co., its principal stockholder. (Docket 1454)

Wisconsin Central Airlines

Applicant of Clintonville, Wis., filed for air transport routes to carry persons, property and mail over three routes between Chicago and Duluth, between Chicago and Clintonville, Wis., and between Marquette, Mich.,

(Turn to page 69)

NEW AVIATION DIRECTORY
by Charles A. Zweng
Member, Institute of Aeronautical Sciences
Author of Radio & Instrument Flying, etc.

This well-known author brings to the aviation world a new authority—an Enclyclopaedic Aviation Dictionary. Again the men and women of America will be indebted to Charles A. Zweng for this, his latest contribution to aviation. For instance, can you define:

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SENSIBLE HORIZON
GEOCENTRIC ALTITUDE

?

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ALTITUDE DIFFERENCE
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ENCYCLOPAEDIC
AVIATION DICTIONARY

These are answered, and thousands of aviation words and terms defined. A "must" for every airman and executive—the keenest working tool on your library. The publishers congratulate the author for this splendid volume—handsomely bound in Maroon Leatherette with Gold Letters. Only $6.00 postpaid or C. O. D.

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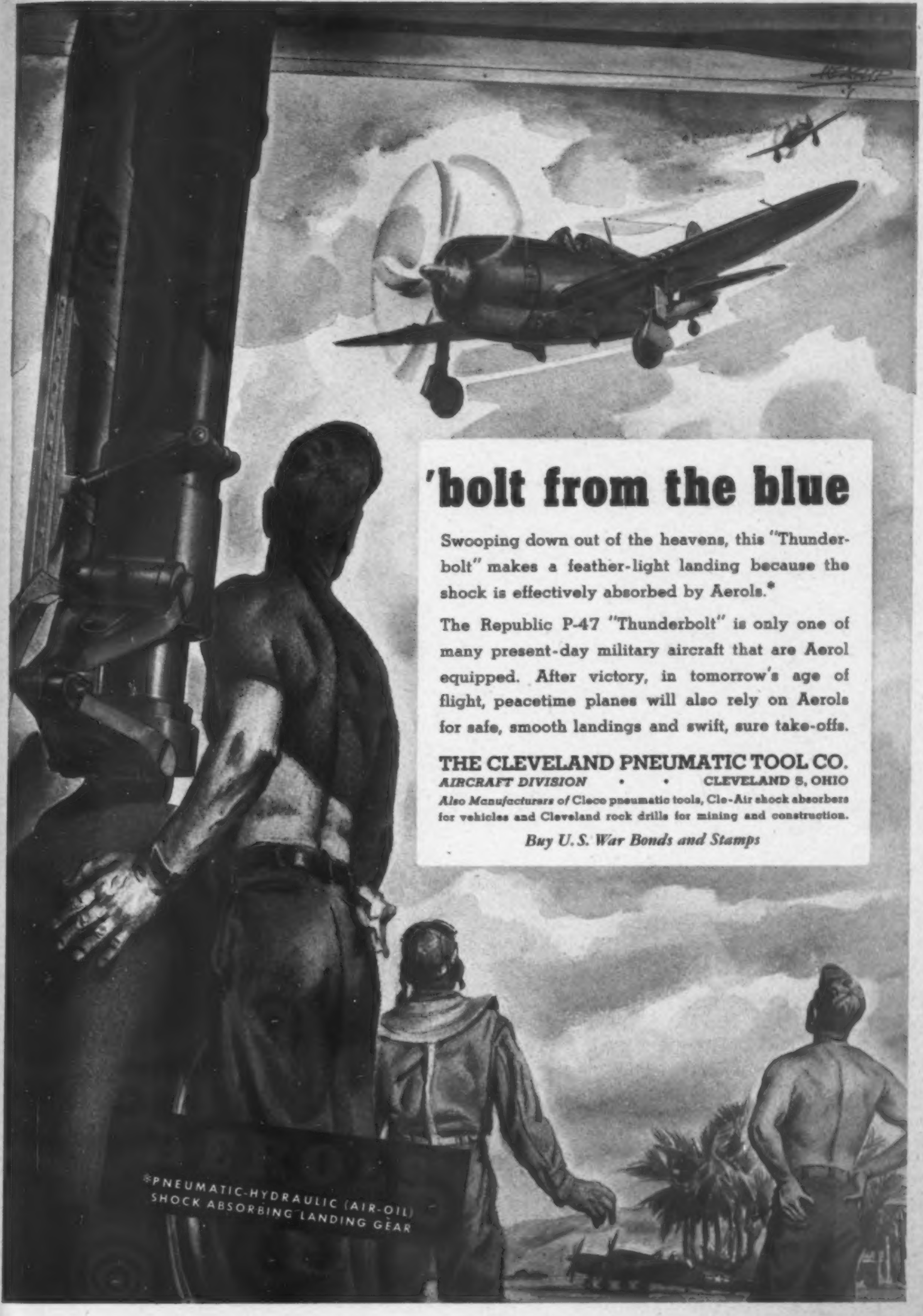

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Swooping down out of the heavens, this "Thunderbolt" makes a feather-light landing because the shock is effectively absorbed by Aerols.*

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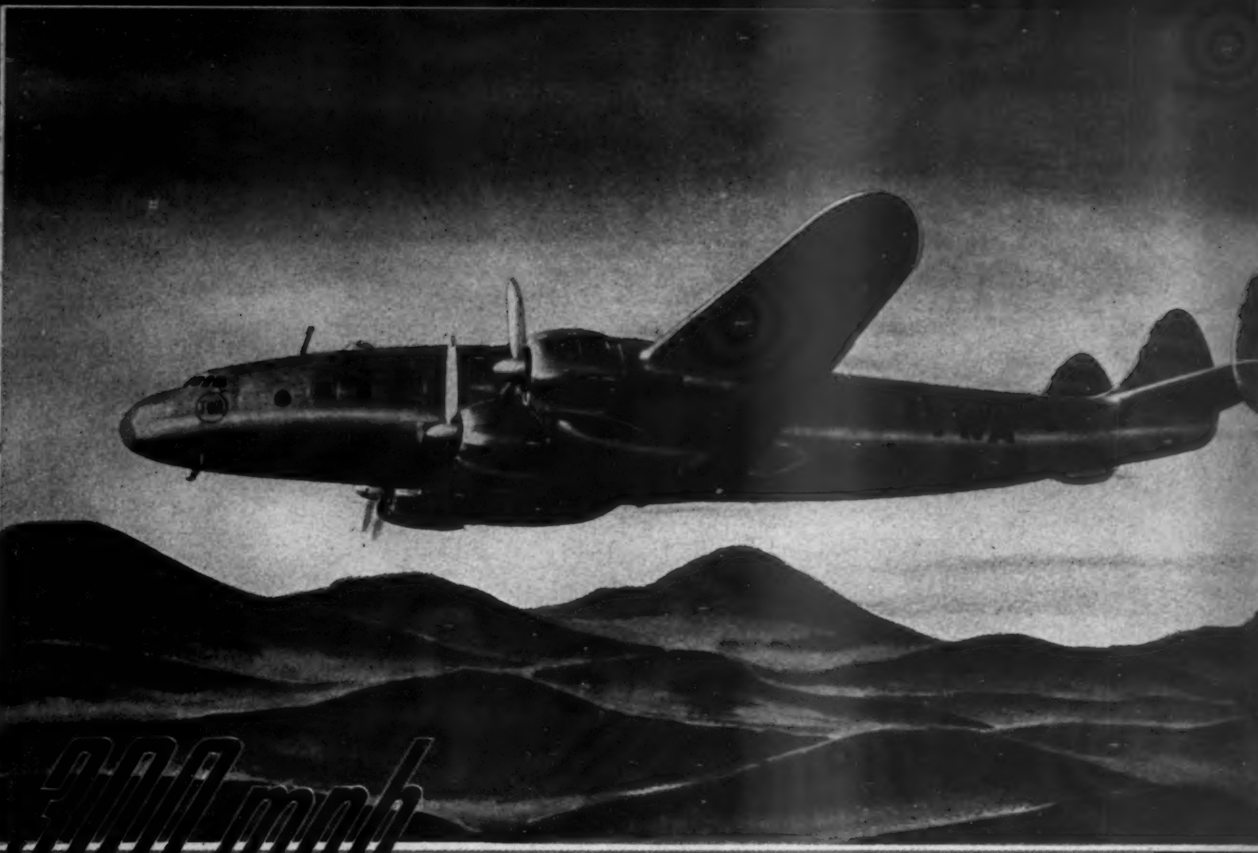


300 mph ...easy for the Constellation and the Link!

TWA LINK INSTRUCTOR, AL MUTCHLER, *checks a "let-down" chart with a student of instrument flying. Formerly Link Instructor for the R.A.F., Mutchler trained many of the Ferry Command pilots who made the first vital deliveries of bombers overseas.*

On April 17, 1944, TWA's new Lockheed *Constellation* hung up the record of 6 hours 58 minutes for non-stop flight, Burbank, Calif., to Washington, D. C. Average speed: 330.17 M.P.H.

Constellations, developed for Transcontinental and Western Air Lines by Lockheed Aircraft Corporation, are going direct to the Army Air Forces Materiel Command for the duration. But when the war is won, they will carry 57 passengers coast-to-coast on regular nine-hour flights, or fly to London and Paris overnight.

Flight characteristics of the new giants of the air are matched by advances in the Link Trainer—which teaches instrument flying on the ground...safely, without cost of lives or gasoline.

TWA inaugurated Link training March, 1938. Links are now in operation in Kansas City, Chicago, New York, Burbank and Washington. Captains take Link refresher courses every month; co-pilots receive 20 hours of Link time in *basic,* 20 hours in *advanced* courses. TWA has given Link training to 900 commercial transport pilots, to 500 other pilots under the War Training Service Program of the C.A.A.

When you travel on United States air lines, you know that your pilot is trained, in case of need, to fly by instruments alone.

LINK AVIATION DEVICES, INC.
BINGHAMTON, NEW YORK, U. S. A.

LINK MANUFACTURING COMPANY, LTD., Gananoque, Ontario, Canada
Link Trainers, Aviation Sextants, and other products contributing to the safety of flight

WHEN WRITING YOUR SERVICE MAN, USE V-MAIL—IT GOES BY AIR

(Continued from page 66)

and St. Paul-Minneapolis via various intermediate points. Conventional aircraft would be used. Francis M. Higgins is president of the company. (Docket 1464)

Non-Route Applications

Braniff Airways, Inc.

This carrier filed an application asking Board approval of its ownership of 25% of the stock in Frontier Airways, Inc., and asks the Board that the hearing be held in conjunction with the hearing on Frontier's application Docket [illegible] for air transport routes. (Docket 1461)

Colorado Airlines

S. N. Drum filed a joint application asking Board approval of an interlocking directorate by virtue of Drum's position as president and director of Colorado Airlines and owner and manager of Colorado Pacific Lines. (Docket 1456) In another application, the company sought similar approval involving the duties of Nathan R. Kobey who is an official in both companies.

Frontier Airways

Frontier Airways and Donald C. Bromfield have filed an application asking Board approval of a proposed interlocking relationship. The Denver company, created under sponsorship of Braniff Airways, Inc., has routes on file to serve cities in Colorado and bordering states. (Docket 1448)

Ray Wilson, Inc.

Applicant filed an application under Section 406 of the Civil Aeronautics Act requesting CAB approval of an interlocking relationship between Ray Wilson, Inc., and the Wilson-Bonfils Flying School of which Raymond M. Wilson is president and Frederick W. Bonfils is vice-president. The Flying School is now engaged in training aviation cadets for the Army. (Docket 1455)

Northeast Purchase of Mayflower Given O.K. if Price is Cut

The Civil Aeronautics Board June 13, gave conditional approval to Northeast Airlines purchase of the defunct Mayflower Airlines, Inc., holder of a certificate for a route between Boston and Nantucket, via three intermediate points.

Approval was given on condition that Northeast pay the trustees of Mayflower $10,000 instead of $17,500, the price stipulated in the purchase agreement.

"Other than land with an appraised value of $8,300, the certificate of public convenience and necessity and the operating rights constitute the whole of the consideration passing to Northeast under the contract," the Board stated. "Accepting this sum as representing the value of the tangible assets, the record in this proceeding does not contain any clear or convincing evidence to support the value of $9,200 for Mayflower's operating rights.

"The certificate to be transferred is one held by a bankrupt air carrier which has not operated its route for 3½ years, and so far as Mayflower is concerned, it is of doubtful value except for sale purposes. While the immediate effect upon Northeast's financial position would be negligible, the sale of certificates at inflated prices is inconsistent with the public interest and is not conducive to the maintenance and development of an economically sound air transportation system. For these reasons we conclude that the contract price is excessive," the Board opinion stated.

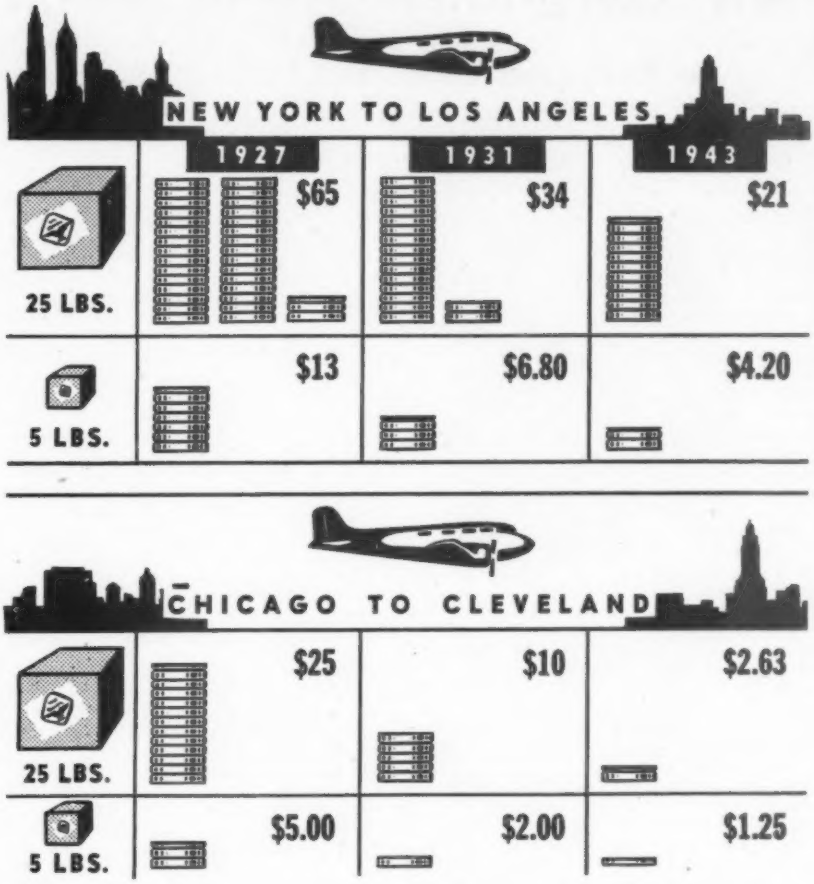
The Board found that inauguration of a sound air transport service in the area would be in the public interest, that payment of a sum of $10,000 for the land adjacent to the present airport at Nantucket, upon which was expended $9,200 for improvement of runways and erection of a radio tower, is not disportionate to the value actually attached to the property and business as to be inconsistent with the public interest.

In approving Northeast's application, the Board followed the recommendations of its examiner F. A. Law, Jr., except as to purchase price, Law having recommended approval on the basis of the purchase agreement.

Special Braniff Course

Illinois Institute of Technology is giving a special course for 40 employes of Braniff Airways as part of its "in service" training in which the institute sets up classes so that employes may get free war training where they work. "Aircraft Electrical Systems" is the course which has been established for Braniff. The three instructors are all engineers at Braniff's Dallas office.

Air Express Rates Show Sharp Drop



This chart illustrates progress made in decreasing air express charges since 1927 on both transcontinental and shorter flights. It was prepared by the Air Express Division of the Railway Express Agency.

Alfalfa Blockade

'Make Hay While Sun Shines' All Right Except for Planes

Transport planes of United Airlines must "fly high" during the alfalfa harvest season around Allentown, Pa.

After having to suspend service at Allentown April 1 under the terms of a temporary injunction issued by the Court of Lehigh County on an action filed by Frank and Mary Dlugos, United resumed its service at Allentown June 7 under a modified court order. The court authorized United to resume normal service for all but 10 days of the year. During those 10 days, United's planes must be at least 100 feet high when they pass over the alfalfa field which borders one side of the airport. Normal flight approach would take the planes over the field at from 30 to 40 feet.

It is understood that the court decided that 10 days would be required to harvest three cuttings of alfalfa during the summer months. The farmers must notify United at least five hours in advance of the time they expect to work in the field.

'Air Cargomen Need Surface Know-How'

Techniques in Air Not Unlike Those in Common Carrier Freight, Says Foley; 'Experts' Ruled Out

By E. J. FOLEY

THREE FACTORS dominate the present Air Cargo picture: the design of cargo aircraft, the development of devices for handling and unloading and exhaustive market research to estimate potential. Each of these elements has its hundred ramifications. Such a comprehensive program must be protected against *itself*. Unnecessary complications will accompany any smug conception of Air Cargo as a virgin field to be cultivated by a chosen few.

Foley

The comparative novelty of this phase of air transport and the apparent absence of precedent or tradition make it fair game for the "experts." It is automatically exposed to the hazards and impediments of pride of authorship, pride of creation and desire for self-perpetuation.

Extravagant delays of warranted development will follow inattention to the simple common sense principles and techniques of common carrier freight transport. The magic word "Air" does not make our problem less of a *cargo problem*.

In the past, we have commented on the need for a *good practical* airplane rather than a special cargo airplane. Reports indicated that a praiseworthy combination in the form of a good plane, designed for cargo, was about ready to go into production but as we write these lines, the fate of this fleet has been practically sealed by contract cancellation.

Told by Airline Men

Please get us straight, we are not qualified to say that the ship is a *good cargo* plane. Airline personnel who worked in intimate liaison with the manufacturer have told us that the craft appeared to represent a new high in serviceability, designed with adequate regard for its work-horse purpose. Those other characteristics of which we are apprised seem reasonable and appropriate.

As a cargo carrier, it should represent more nearly the goal than most other aircraft in that its destiny as a freighter has been established since its inception. However, we wonder if it does not provide an excess of volume for the payload permissible. In the main, aircraft have been designed around passengers whose "density" in pounds per cubic foot is extremely low, considering aisles, seat spacing, lavatory, etc.

This philosophy, if carried to a cargo design, results in a design density of 3-5 pounds per cubic foot. Only a few commodities, such as ladies' hats or ping pong balls, would load in such a volume without weight-costly tie down, bracing, etc. This is really one of the lesser disadvantages. We are always searching for ways to cut costs and so tap new markets.

Now suppose we could cut our cargo volume to one-third, retaining the same payload. The economies of such a change are so obvious as to make explanation unnecessary. Yet, there is nothing to indicate that a trend in this direction is not entirely sound and appropriate to the future of Air Cargo. The significant thing is that it is not an *air idea*. It came from an ex-motor transport operator. With him, it was simply cargo common sense.

Need Cargo Plane Design

The industry still awaits the design of an efficient cargo carrying aircraft. A study of what surface cargo carriers have done in the design field carried out with a sincere effort to correlate all comparable elements will bring us a great deal closer to the ideal.

The problems of handling and loading are common in many respects for the surface and air vehicles. An admirable absence of Rube Goldberg gadgets has marked this element of the program. It is doubtful that extensive, complicated mechanization or fully automatic techniques will be attainable. It may be just as well that they are not. The simplest solution is worth a long search.

We may have another series of lessons to learn from the surface carriers in this regard. They place a great amount of dependence upon straight-away manpower assisted by simple mechanical aids. Who is able to prove this same method is inadequate for air cargo? Insistent pleas for mechanical aids that do everything but compute the location of the load for best balance may be predicated upon experience with ill-trained personnel, improperly or insufficiently supervised. We are not impressed with the efficiency of the air express handling which we have observed.

The increases of air cargo volume expected even by the most conservative crystal gazers will demand improvement of handling and loading in at least two directions: productivity per man and establishment of responsibility for every movement. The first is attainable through the development of self-sufficient small crews, led by one of the working members; the utilization of competitive incentives with such a setup can bring significant results.

Volume cargo carriage and fixed individual responsibility have been inseparable; there is no magic in Air that affects this situation. Damage claims, losses and all the other irregularities, which are inevitable, even though infrequent, become indirect "gifts" of the carrier. No recourse is possible; the buck is passed from the first man who admits he *may have* touched it to the last man who is sure it was damaged on arrival.

This suggests the need for simple, practical, definite "waybills" or something of the sort which provide a permanent record of accomplishments as well as errors. To the air carrier anxious to preserve that "one, big, happy family" status, this is red tape and should be nipped in the bud. For such a case, we can offer no encouragement. Big business has its price; you'll get it only by being ready with those things which comprise the price.

The last dominant factor under discussion is that of market research for the establishment of potentials. It is herein that the threats of pride of authorship, desire for self-perpetuation, etc., may be encountered; for, it is here that the "experts" operate.

A survey can be made in three steps. First, a flat rate per ton mile may be established as practical for the period under study. Secondly, manufacturers and distributors can be solicitated for information on the volume of their goods that can move at that rate. Finally, you add up the results of the survey and you have the potential market.

'Process in Error'

To our way of thinking such a process errs in every step. It makes no attempt to establish a set of characteristics for air cargo transport around which the industry should develop its cargo policies. It ignores the invaluable, largely applicable science of sliding scale rates and commodity classifications which are essential to a sound operation. It produces a superficial estimate of potential market made up of amateur evaluations of "layman's" guesses.

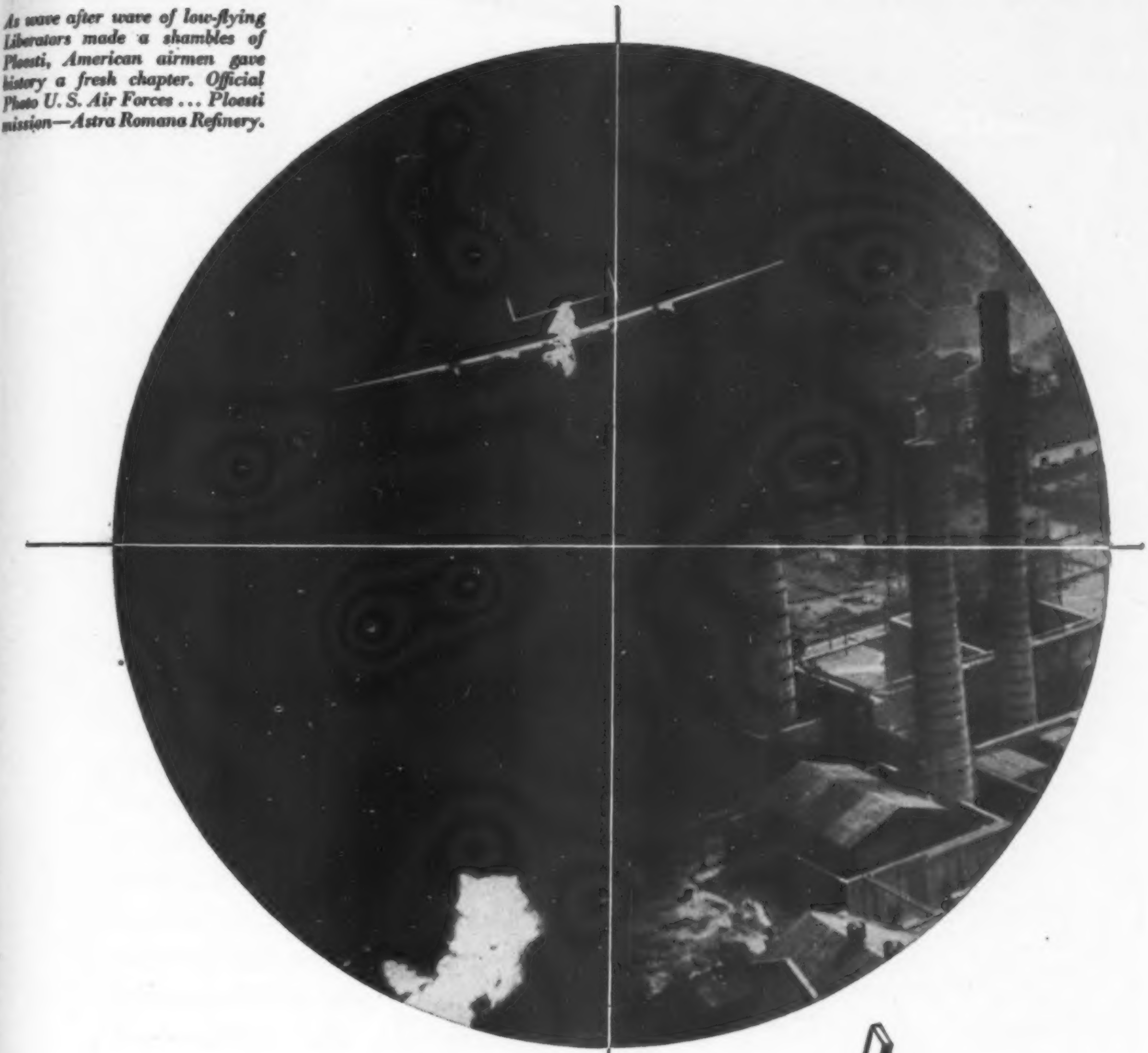
Suppose in lieu of such a questionable effort, air cargo characteristics were developed, a rate scale and initial classification were devised with the aid of surface transport experience and of shippers themselves. Then as a final step, substitute cargo engineering for guessing ton miles.

Cargo engineering doesn't ask a shipper what his volume will be at 40c a ton mile. It endeavors to *learn* all it can about the shipper's product, his processes and his market. It blends these data with the appropriate characteristics of air cargo transport and goes on to prove to the shipper that 70% of his line can move by air, *all factors considered* instead of the 5% or 10% survey guess.

Something new, this engineering of freight traffic? Hardly. It is another surface practice—simple, short, direct and effective.

At the risk of being labeled a reactionary who would hamstring the free growth of air cargo, we have attempted to point out briefly a few of the dangers of pride, exclusivity and neglect of effective solutions to common cargo problems arrived at by surface carriers. Surely, it would be equally dangerous to take surface practice lock, stock and barrel and apply it to air cargo. What do you think?

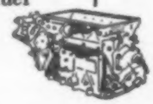
As wave after wave of low-flying Liberators made a shambles of Ploesti, American airmen gave history a fresh chapter. Official Photo U. S. Air Forces . . . Ploesti mission—Astra Romana Refinery.



. . . AT THE FUTURE "PLOESTIS"

EVERY red-blooded American hopes for many more headlines that shout "Mass Raid by American Liberators." Every solid punch these heavyweight fleets drop on enemy targets . . . every future "Ploesti" . . . is possible only through the courage and skill of the American kids that fly them, and the unceasing work of free American craftsmen who build them.

With millions of other war workers, the men and women of CECO look forward to each new record-smashing performance of the latest Liberators and other American warplanes equipped with CECO carburetors and fuel pumps.



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Lyon's Aircraft Division is under the supervision of men specially trained in aircraft plants. Our production organization is completely familiar with Air Corps, Navy and other Government inspection requirements. War contract experience dates from July, 1940, and covers over 2400 contracts from 30 states. Sound, alert management. Adequate finances.

Check Lyon for open capacity for volume production of Chrome-Moly steel tubing assemblies... wing fittings, spars, oil filter, frames, super-charger frames.

Write on business letterhead for detailed information and book "Craftsmen in War Production."

LYON'S EXTENSIVE PRODUCTION RANGE
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- Hydropress Work.
- Brake Forming Operations, Aluminum and Steel.
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Do your post-war products include sheet steel or aluminum? Check Lyon's manufacturing and designing facilities.

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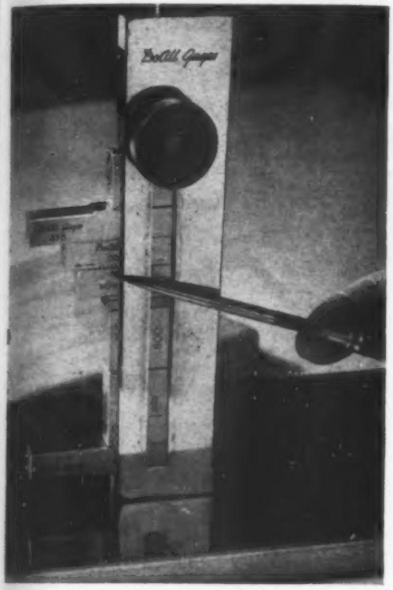
Equipment News

New Vernier Gage

Continental Machines, Inc., 1301 Washington Ave. S., Minneapolis 4, Minn., announces the new DoALL Vernier Gage, which is said to extend simply and effectively the range of combinations of sizes which can be made with any set of gage blocks. The Vernier Gage is shown in use with standard gage blocks and gage holder to make up a snap gage measuring ten micro inches with millionth accuracy.



'Airport Caution' Brings Advice of Consultant

E. J. Foley's article, "Caution Urged in United States Airport Expansion" in the May 15 issue of *American Aviation* struck a responsive chord with R. J. Young, consultant of Aviation Services Co., Minneapolis. Mr. Young's letter follows:

Your article in the May 15 *American Aviation* magazine entitled "Caution Urged in United States Airport Expansion", in our opinion, strikes a chord which can well afford to be broadcast throughout the country. The wisdom which is sometimes exemplified in municipal planning of airports is without doubt questionable, particularly in relation to the planning for the management of airports.

It is noted that you have touched upon the idea of a municipality engaging the services of an experienced business management firm to operate its airport, and from the tone of your writing, we assume that you are merely raising the question as to the advisability of so doing on an experimental basis.

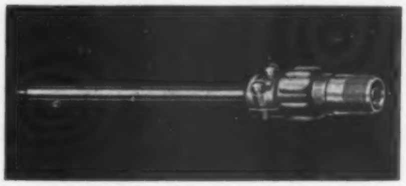
This firm was established primarily for one purpose, that is, to offer a commercial service to municipalities and private industrial concerns under which the application of sound business principals would be applied to the aviation business.

The principals of the firm are former airport managers, as well as operators. We would like to have an opportunity to try out your idea, for since the inception of this firm, our time has been entirely taken up with counsel to the municipality and others, and thus far we have had no chance to furnish and direct the actual management of an airport.

We are merely writing you at this time to point out that there is already in existence a firm which offers a service such as you mention, and who propose to make a business of doing this very thing.

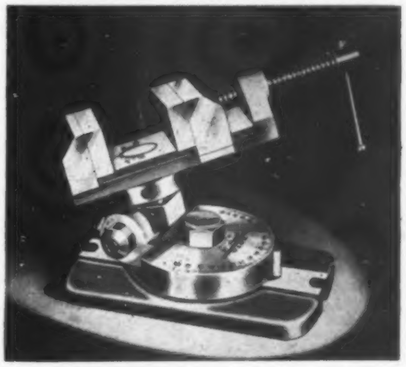
Fire Detector

Fenwal Incorporated, Ashland, Mass., announces this new Fire Detector for use throughout aircraft; primarily engine and accessory sections. The unit is offered in a continuous type and a unit type; the continuous type is in the form of a fusible alloy tube copper-plated, containing inorganic insulating beads which support a conductor wire. The unit type operates on the principle of the Fenwal thermoswitch in which the temperature detecting unit is based on the expanding shell which separates two silver contacts carried on curved invar struts under high spring tension. Regarding the continuous type, flame applied to the assembly causes the tin alloy to melt, filling the spaces between adjacent beads thereby completing the circuit between the conductor wire and the grounded tube. The circuit thus completed is used to actuate either signal light or other alarms.



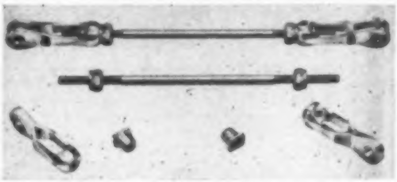
All-Angle Vise

The industrial engineering firm of Melvin Douglas and Assoc., Chicago has designed and engineered this new Hilco All-Angle Vise, just announced by the Berco Mfg. Co., 429 W. Superior St., Chicago. Made in three sizes: 3½", 4½" and 6" jaw widths, the features of the unit claimed by the manufacturer are: three highly accurate and legible protractor dials for horizontal, vertical and diagonal settings; patented drive wheel movement giving 2¾" lateral clearance; double swivel construction; positive horizontal setting for highest 180 degree setting; elimination of excess weight for easy handling.



'Socketype' Rod End

This new Socketype clevis rod end is announced by Poulsen & Nardon, Inc., 2665 Leonis Blvd., Los Angeles, 11. This new rod uses the special terminal developed some time ago by P & N. In place of the cable end, engineers have now designed a Socketnut that fits in the socket of the terminal, and into which the rod end goes. This nut is produced with right or left hand threads, and the flattening of opposite sides permits tightening with an end wrench.



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NOW UNDERWRITERS' APPROVED

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Finger-operated. Welded side terminals. Knob and body black bakelite. Positive fuse grip. Full visual shock-proof inspection. Spring-activated cup. Specially designed grip prevents fuse from dropping out.

Also furnished screw-driver operated (341001), meeting Underwriters' specifications.

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Leading Aviation Stocks

New York Stock Exchange

	Week Ended June 17				Week Ended June 24			
	Sales	High	Low	Net Change	Sales	High	Low	Net Change
American Air.	5.700	67¾	63	+3⅞	3,500	68¾	67	+1⅛
Aviation Corp.	87.800	4¼	3¾	+ ½	81,400	4½	4⅛	.....
Beech Airc.	5 300	8⅝	7⅞	+ ⅞	1.900	8⅝	8¼	— ⅜
Bell Airc.	10,400	12¾	11	+1⅛	5,100	12¼	11½	— ⅛
Bendix Aviat.	22,900	47⅞	38	+3⅝	10.800	41⅞	39¼	—1¾
Boeing	14,700	14⅞	13¼	+1⅝	6 600	15	14⅜	— ⅜
Convair	32,600	14¼	13	+1¼	11.100	14½	13⅞	— ⅛
Convair pfd.	1 700	22¼	20½	+2	3.900	22¾	22	+ ¼
Curtiss-Wright	72 500	5¼	4⅞	+ ⅜	41,200	5⅝	5⅛	+ ¼
Curtiss-Wright A	8 300	16⅛	15⅛	+1¼	8.600	16½	15⅞	+ ⅜
Douglas Airc.	10 000	53¾	48½	+5¾	5,300	54¾	51⅝	—1⅝
Eastern Airl.	5.200	38½	35½	+3¼	5,700	39¼	38½	+ ¼
Ex-Cell-O	7,400	37	34¼	+2⅞	5,000	37⅞	35¾	—1
Grumann	26 800	15⅝	12⅞	+2¼	6,700	15⅛	13½	—1½
Hayes Ind.	12,600	8⅛	7⅝	+ ⅛	3.300	7⅞	7¾	+ ⅛
Lockheed Airc.	20 800	16⅝	15	+1¾	15.200	16⅞	15¾	— ⅜
Martin, G. L.	8,800	19⅛	18	+ ⅞	1.800	19¼	18½	.....
National Aviat.	5.600	12½	11	+1½	4,500	12⅞	12⅛	+ ⅛
No. Am. Aviation	24,500	8½	7¾	+ ¾	12,300	8¾	8⅜	.....
Northwest Airl.	20.400	24½	20	+5	8.500	25	23¼	—1
Pan American	26.400	34	31⅛	+2¾	12,800	34¾	32½	—1½
Penn-Central	9,100	15⅞	14⅝	+1⅛	6,600	15⅛	15¼	— ⅛
Sperry Corp.	17,000	25⅝	23⅝	+1⅛	21.700	28	25⅛	+2⅜
Thompson Prod.	2,200	43½	42½	+1½	1.900	44	43¼	.....
TWA	8,200	21⅜	19½	+1⅞	7,700	22⅛	20⅝	+ ¼
United Airl.	31.400	28⅝	26	+3¼	17,200	29½	28⅜	+ ¼
United Airl. pfd.	500	113¼	113	+ ¾	200	115¾	115¾	+2½
United Aircraft	14.800	28¾	27	+1¾	13,900	29¼	27¾	— ¼
United Aircraft pfd.	1 300	103⅞	102¾	+ ⅝	600	104	103	— ⅜
Wright Aero	300	74	71½	+3½	9,000	77	74½	+1½

New York Curb Exchange

	Week Ended June 17				Week Ended June 24			
	Sales	High	Low	Net Change	Sales	High	Low	Net Change
Aero Supply B	2,200	3⅝	3⅜	+ ¼	1,500	3½	3⅜	— ⅛
Air Associates	5,000	10⅛	8⅝	+1⅜	500	10	9⅞	— ⅛
Aircraft Access.	21,700	4	3⅝	— ¼	17,300	4	3⅝	+ ¼
Aro Equipment	11,200	10½	9¾	+ ⅝	10,800	11⅛	10¾	+ ¼
Breeze Corp.	12,800	13⅜	10½	+2⅞	14,100	13⅞	12¾	+ ⅛
Brewster Aero	4,800	2¼	1⅞	+ ¼	4,400	2¼	2	+ ⅛
Cessna Airc.	6,000	9	8½	+ ⅛	10.800	9½	8½	+ ¾
Colonial Airl.	4,200	8	7	+ ¾	1.600	8	7⅝	— ⅜
Fairchild	3,400	1⅞	1¾	+ ¼	6,800	2	1¾	+ ⅛
Irving Chute	400	8⅝	8⅛	+ ⅜	700	8⅝	8⅛	+ ⅛
Jacobs	1,900	3¼	3	+ ⅛	5.700	3½	3	+ ⅜
Northeast Airl.	12,500	10¾	9¼	+1	6,100	10¼	9½	— ¼
Republic	14,700	4⅛	3⅞	+ ⅛	8,800	4⅛	3⅞	+ ⅛
Ryan Aero	2,700	3⅜	3¼	+ ¼	1,100	3½	3¼	+ ⅛
Solar Airc.	1,400	3½	3¼	— ⅛	1,600	3½	3¼	+ ¼
United Airc. Prod.	4,400	7¾	7⅛	— ⅛	2,800	7⅝	7¼	+ ⅜
Waco Airc.	500	3¼	3⅛	+ ⅛	400	3¾	3½	+ ½
Western Airl.	3.000	9⅜	8⅜	+ ⅞	1.300	9⅜	8⅞	— ⅛

The Pilot's Lament

(This poem was submitted by Capt. C. E. Botsch of American Airlines in reply to "The Co-Pilot's Lament", by AA's Capt. Arthur L. Caperton, published in *American Aviation's* issue of July 1, 1943.)

I am the captain, I sit on the left—
It's up to me to be quick and deft.

I have to smile, while my co-pilot frets;
And foot the bills when he loses the bets.

I sign the flight plan, and cuss out the weather—
And know left from right, when it's time to "Feather".

The Stewardess claims the passengers aren't sporting,
So I can sell "good will"—and am accused of courting.

When visibility is poor, and it's a freezing shower,
I'm the guy that worries if we have enough power!

I check the log, for if the figures aren't right
The paycheck is "day" and we all love "night".

My crews have learned to laugh at my jokes,
But they pan the captain while sipping "cokes".

The Stewardess thinks that I'm old Father Time,
And the co-pilot is no help, with his "Hollywood Line".

So, I sit and gripe about this and that—
Light pay, and taxes, and if I'm growing fat.

The Market is falling, and the lunch is lousy—
The ship's rigged wrong, and my uniform is frousy.

They call me at seven your scheduled for Link
The Chief Pilot bawls, "That slow approach stinks".

In the Captain's seat, I'm vertible scrooge
And my wife well knows at home I'm a "stooge".

When my co-pilot bounces it's the runway that's rough—
It's dusty, they're crabby, and other stuff . . .

Now to him, these problems are past understanding.
But if he doesn't turn "wolf", he'll get another landing.

Financial Notes

UNITED STATES PLYWOOD CORP. has declared regular quarterly dividends of 30 cents a share on the common stock, and $1.18¾ a share on the preferred stock. The common dividend is payable July 20 to stockholders of record July 10. The preferred dividend is payable July 1 to stockholders of record June 20.

CESSNA AIRCRAFT CO. stockholders have approved increase in authorized capital stock from 500,000 to 1,500,000 shares, and also have approved elimination of restrictive provisions described in proxy statement from articles of incorporation and by-laws. Board of directors have passed confirming resolution declaring stock dividend of share for share to stockholders of record on June 15 payable June 30.

CANADIAN VICKERS, LTD. reveals an all-time production high in the fiscal year ended Feb. 29. While operating profit was well above the preceding year, net profit was down sharply due to increased taxes. Production volume was $53,371,427, of which the aircraft division at Cartierville contributed $23,815,008. Profits, after provision for all charges and contingenices but before income tax and ordinary depreciation, amounted to $4,799,835. Out of this, provision has been made for income and excess profits taxes of $4,476,488, and for ordinary depreciation in the amount of $222,655, after which net profits remain at $100,691. This compares with $546,946 in the previous year.

AIRCRAFT ACCESSORIES CORP. has obtained a V-type credit of $12,500,000 through 12 banks in Kansas City, Los Angeles, Denver, New York, Wichita, and St. Louis. R. C. Kemper of the City National Bank and Trust Co., Kansas City, announced that in less than three years Aircraft Accessories had become one of the chief industrial enterprises in Greater Kansas City.

GRUMMAN AIRCRAFT ENGINEERING CORP. stockholders have authorized an increase in the common stock from 600,000 shares of the par value of $1 per share to 3,000,000 shares of $1 par value per share "to set up a reserve of authorized and unissued shares to cope to best possible advantage with postwar readjustment problems."

Incorporations

PUGET SOUND AIRWAYS, INC., Seattle, to engage in the transportation of passengers, mail, and freight; $50,000; M. G. Solberg, Roger L. Shidler, and E. J. Carter.

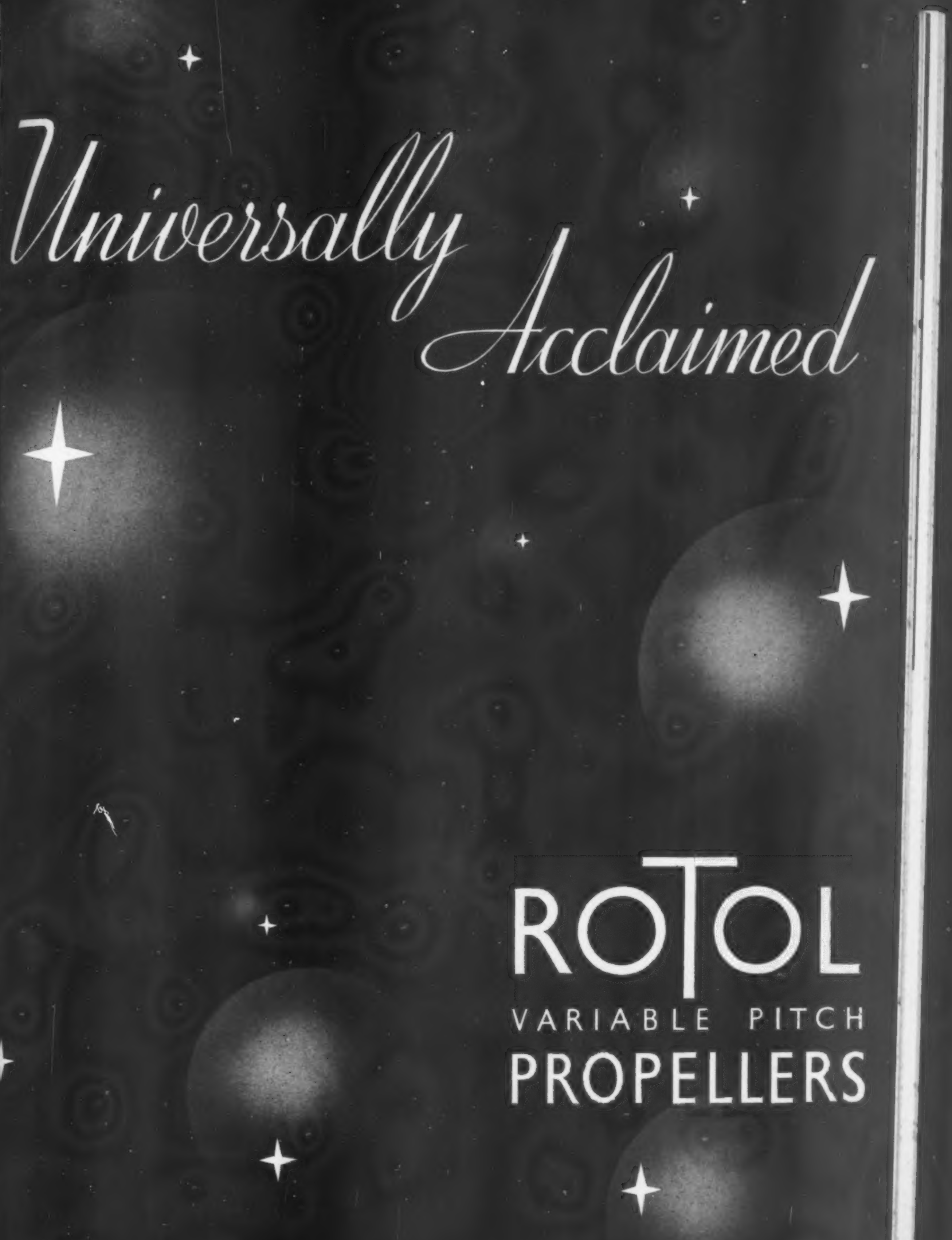
SILVER TRIANGLE FLYING CLUB, Louisville, to promote flying in connection with the Civil Air Patrol; non-stock; Ray T. Aguiam, John R. Lewis, and J. G. Richey.

DOUBLE THREE FLYING CLUB, INC., Anderson, Ind., to promote interest in aviation; non-stock; Charles R. Humphrey, Marvin Ellis, and Carl F. Strader.

GREAT PLAINS AIRWAYS, INC., transportation business; capital, $500,000; Corporation Trust Co., Wilmington, Del.

LONE STAR AIRWAYS, INC., transportation service; capital, $500,000; Corporation Trust Co., Wilmington, Del.

ILLINOIS AIR LINES, INC., 10 S. La Salle St., Chicago; commercial flying service; 10,000 shares common pv $10; N. R. Kobey, A. D. Davis, L. A. Chase, incorporators.



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Government Gets Improved Grasp on Handling Cutbacks

Brunt of Reductions To Be Borne This Year By Subcontractors

CUTBACKS in the aircraft industry have assumed a fairly definite pattern and are widely distributed throughout the country, but specific figures on the planned production of the various military planes for the remainder of this year and for 1945 are still restricted.

Despite the troublesome experience of last month's Brewster Corsair contract cancellation, the Government agencies now appear to have a firmer grasp of the contract adjustment program and to be in a position to minimize the effects of cutbacks until the end of the war actually brings comprehensive curtailment of warplane production.

Developments indicate that subcontractors to the airframe manufacturers will bear the brunt of contract reductions this year, and that as orders for some plane models are terminated more of the aircraft work will be taken back under the industry's own roof.

General employment within the major aircraft industry itself is expected to be off not more than 10% or 15% for this year, unless military requirements suddenly change.

Big Bombers Increase

Production of the heaviest types of four-engined bombers will continue to increase, as will production of long-range fighters such as the P-51, P-38 and P-61, for which requirements in the Pacific campaign are expected to continue heavy.

Among the specific cutbacks announced during the last fortnight is the welded stainless-steel Conestoga cargo plane manufactured in Philadelphia and Bustleton, Pa., by the E. G. Budd Manufacturing Co. The Navy cutback amounted to approximately 175 planes, leaving only 25 of the total original contract of 800 to be produced. The Army previously had cancelled its contract for 600 Conestogas.

A Navy statement said: "The Navy's needs for cargo transports will be met by the delivery of lower cost Douglas R4D transport planes now available from the large-scale Douglas production for the Army. The Budd plane is not yet in large scale production and output has lagged seriously, only four having been delivered to date. The production costs are substantially more than the company's original estimates."

The Douglas A-20 contract is being terminated with all orders to be completed by Sept. 31. As a result, new contracts have been completed which Douglas officials said would step up the Douglas C-54 Skymaster program 600%.

"As rapidly as tooling is completed and the A-20 area becomes available the transports will begin moving down a new C-54 production line in space previously devoted to attack bombers," it was stated by Frederic W. Conant, vice president of manufacturing. As a result of this development and other work prospects, personnel readjustments incident to the gradual termination of A-20 contracts will involve no mass layoffs at any time and eventually may affect only a small number of employes, the management stated.

The Fairchild Aircraft Division, Burlington, N. C., has announced partial termination of its AT-21 (Gunner) contract. General Manager Lee H. Smith said the termination "will not impede the monthly schedule until Jan. 1, when we will start on new contracts now being formulated."

The Navy's contract with Douglas Aircraft for SBD Dauntless dive bombers has been terminated pending redesigning of the airplane to meet revised combat requirements. The Douglas production line at the El Segundo was scheduled to finish SBD work about July 1, and as much of the plant's facilities as possible will be turned over to modification work pending completion and acceptance of the new design.

The AAF contract with Aeronca Aircraft Corp., Middletown, O., to build the UC-64, 550 hp, single-engine Norduyn Norseman has been cancelled.

One of the first of the prewar aircraft companies to be reduced to a skeleton organization following termination of military contracts is Howard Aircraft Corp., St. Charles, Ill. Some spare part work is continuing but the company is unable to engage in commercial building until the material situation is lifted.

Modifying the Mustang

North American P-51's are being modified at the Tucson Division of Consolidated Vultee Aircraft Corp. On the line shown above, the fighters are being equipped with auxiliary fuel cells to increase their combat range.

Sticky Fingers, But Honest!

When Helene Griffith of Boeing Aircraft, Vancouver, was assigned the job of putting tiny nails into the skin of a Catalina patrol bomber, she found the nails hard to hold. Besides, she was always hitting her fingers with the hammer. She got a piece of plywood and wrapped a piece of masking tape around the end of it, folded with the adhesive side out. With one hand she picked up the little brads on the sticky tape and held them in place for her hammer to bang them in one by one.

Transport production will continue high on practically all models. Glider production is now off about 90%, and this reduction is felt most severely by the furniture and allied industries which went into this field.

As cutbacks and decreased monthly schedules go into effect, according to well informed industry sources, prime contractors will handle more and more work formerly subcontracted, thus tending to stabilize employment within the aircraft industry proper.

Contractors to the Army are getting considerable advance notice of cutbacks and reductions, and efforts are being made to obtain similar action from the Navy.

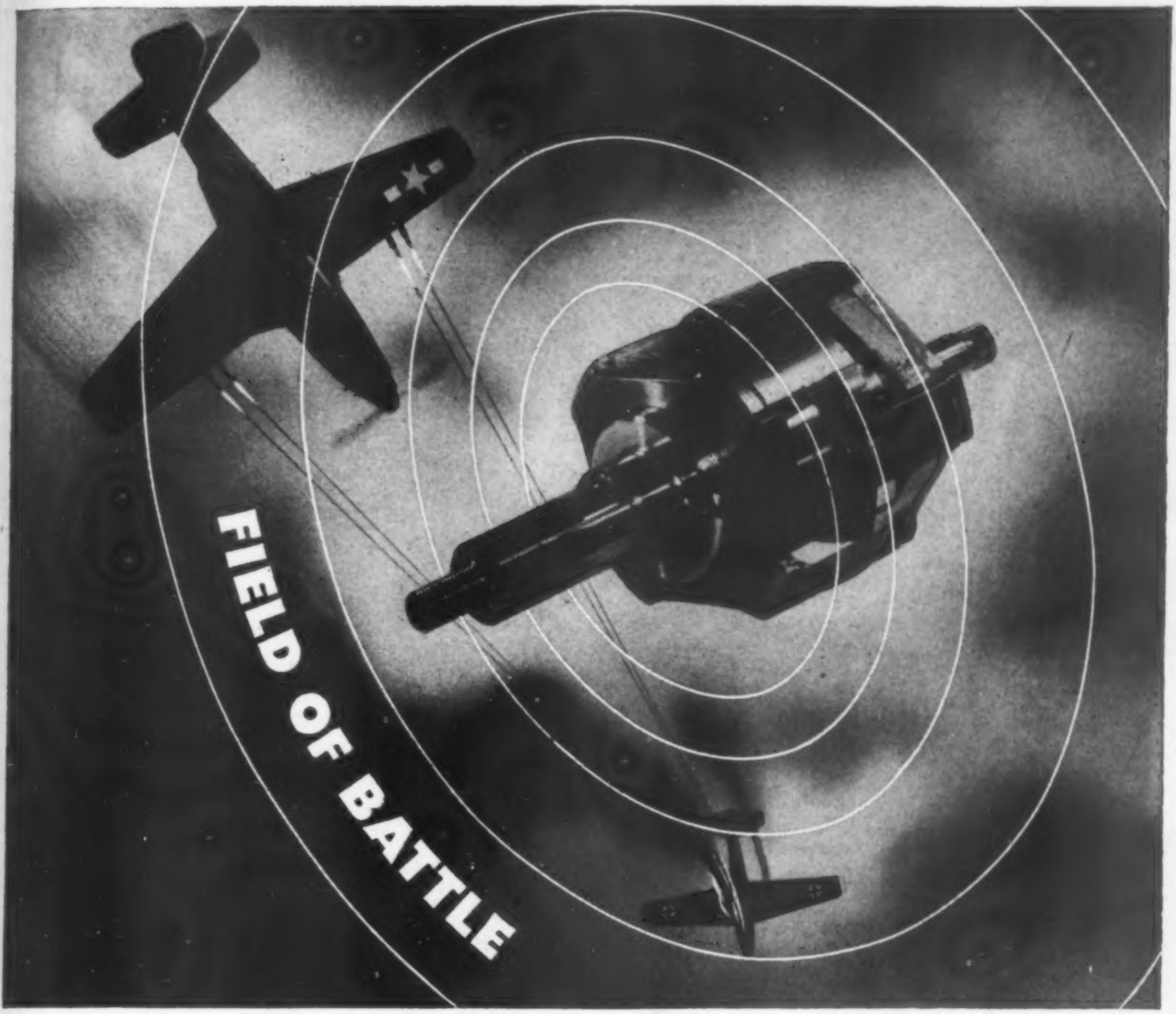
It is expected that monthly output totals of airplanes for 1944 will remain in the 7,800-8,800 range, but that total weight of aircraft will go up. In many instances, the monthly level of reduction adopted by the Army is under the capacity of the plants involved, or under former monthly output. Rapid changes in the contract situation may be expected in 1945.

CAB May Buy Several Planes For Accident Investigators

The Civil Aeronautics Board, the government agency which has most to do with the development of the country's air transportation system, may buy several small planes so that its Accident Investigators can get to the scene of accidents quickly. Purchase of 13 two-place Stinson L-5 Sentinels is under consideration.

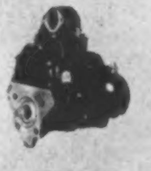
This type plane was used by the Army for observation purposes and because of its 185 horsepower, it is considered ideal for landing and take-off in small fields. Under present arrangements, the investigators must rely largely on surface transportation in getting to the scene of accidents.

The industry generally has recognized the need for faster transportation for Board personnel. Others in the industry have expressed themselves as believing the Board should have a two-engine transport plane for Board members when they travel on official business. They point to the fact that top officials in many other civilian agencies of the government have planes assigned for their use on official business.



THIS is the field of battle in the sky…the stable field of a rotating magnet…heart of a Bendix-Scintilla* Aircraft Magneto. Into the making of this vital part go superlative steel and precise engineering…for on the strength and stability of its magnetic force depends the generation of sparks to fire the engines of our fighting aircraft.

Bendix-Scintilla engineers have contributed notably to the advancement of Aircraft Ignition. Their inventiveness and practical experience, now wholly devoted to the prosecution of the war, will one day again be applied to the pursuits of peace.



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Lifting of Aluminum Restrictions Leads WPB Reconversion Activity

RECONVERSION AND adjustment of industry after cutbacks or complete termination has passed from the top planning stage to the many operating offices and divisions of the War Production Board. Several specific steps have been announced by Chairman Donald Nelson.

Nelson gave instructions to revoke immediately WPB orders limiting the use of magnesium and aluminum so that manufacturers will be able to obtain these metals and fabricate them into essential end products whenever and wherever manpower is available. Existing restrictions on the manufacturer of end products from aluminum and magnesium are being lifted to permit manufacture of items from these metals as the manpower situation permits.

An order is being prepared authorizing manufacturers to acquire enough materials and components to make and test a single working model of any product planned for post-war production. In addition, manufacturers now are allowed to purchase machinery, tools and dies for civilian production, whenever possible, out of existing surpluses listed with WPB and Defense Plant Corp.

Several other preparatory steps are being taken by WPB divisions which have not yet been announced by Nelson. These include drafting of procedures which would allow war contractors to produce essential civilian goods during lulls created by the cancellation of one war contract and preparation to begin work on another. This move would enable contractors to maintain a full working force and to fill gaps in the civilian economy without seriously diverting energy from war production.

Other officials are drafting an order designed to tell manufacturers and distributors whose production is partly or completely cancelled what to do about their production, their extra materials and what WPB authorizations may be obtained for special actions. The regulation which would attempt to make the most efficient use of facilities and materials after termination, collects existing provisions in present orders regarding disposition of materials, adding minor relief measures for manufacturers for whom immediate stoppage would cause severe loss.

Aircraft Industry Faces Three Hurdles With End of War Output, Says Wilson

The aircraft industry faces three major hurdles—contract termination, disposal of surplus goods, disposal of surplus plants—"any one of which may cause it to come a cropper," said Eugene E. Wilson, vice chairman of United Aircraft Corp. and chairman of the board of governors of the Aeronautical Chamber of Commerce, in an address June 16 before the New England Council in Boston.

"Contract termination is already upon us," he warned. "Even if proper legislation were available, and it is not, the administrative task of cutbacks is of such magnitude that it could only succeed by bold, courageous tactics such as are possible in private business."

Wilson observed, however, that contract termination is largely dependent upon Government agencies, and that "bold, courageous business action and Government are mutually incompatible."

In the matter of disposal of surplus goods, Wilson drew a contrast between the aircraft and the auto industry which, he said, has a similar conversion problem, but its fundamentals are "relatively easy."

3 Miles of Wire in C-54

Three miles of wire and a million rivets go into the C-54 Skymaster, Douglas Aircraft Co. reports. Standing two stories high with a wing span about equal to the length of an average house lot, the C-54 has control cables which, if welded together, would stretch across the Mississippi River at its widest point. More than a ton of steel bar goes into the Skymaster and a ton of steel sheeting goes into the Skymaster, Douglas reveals.

"Every day that passes increases the demand for new autos. Likewise, every day that passes sees the auto industry contributing to the surplus of aircraft," he asserted. "The auto industry can reconvert to its normal business. The aircraft industry will have to cut back to whatever is left, in face of an enormous surplus."

Discussing the disposal of surplus war plants, Wilson observed that the expansion of plant facilities compares in magnitude with the expansion of output.

'Great Performance'

"The creation of these facilities was one of the great management performances of our history," he said. "Today, it hangs over us like a pall. If, perchance, the Government should decide to operate these plants like arsenals to supply the small remaining demand for aircraft materials, the aircraft industry would be destroyed, for, unlike the auto industry, the aircraft industry is a public activity. Even in normal times, the Government is the chief customer of the aircraft industry. No supplier can successfully compete with his customer."

In another address before the Council, Joseph T. Geuting, vice president of General Aircraft Corp. and chairman of the Personal Aircraft Council of the Aero Chamber, outlined the Chamber's program to put "every community in America on the air map" through the construction of Airparks, Flightstops, and Air Harbors, in addition to Airports.

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SELECTION: The training of your postwar sales force should begin NOW. We can, through our Personnel Evaluation Service, help you select your salesmen.

TRAINING: We can, through our complete Sales Training Program, teach these men how to sell your product. The entire program is under the personal supervision of outstanding authorities in aviation sales and sales engineering.

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HOW *Pan American Airways* PACKS 2,100 HOURS INTO A DAY

THE minute the giant transatlantic Pan American Clippers get back to their base, they get an exhaustive going over.

It's thorough. And it's fast.

A swarm of mechanics, working in eight-hour shifts, get the job done in 60 hours – 2,100 man-hours a day.

What helps this swift turn-around are Elastic Stop Nuts. These nuts have been on every Pan American Clipper since 1928. They are on motors, mounts, wings and countless structural parts.

Particularly timesaving are the Anchor Nuts which permit smooth blind mounting. Hundreds of these fasten the covers for inspection openings. These Anchor Nuts* are an Esna development and are used by millions in all kinds of airplanes.

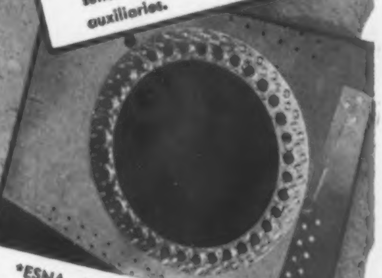
Elastic Stop Nuts lock tight and fast without any auxiliary devices. There's no time wasted in fussing to get them off and back on again.

They lock because of the elastic collar in the top. This collar squeezes in between the bolt threads. It's compressed tight. The nut can't turn. It can't wiggle. It can't shake loose. And you can take it off and put it on again many times and it still locks.

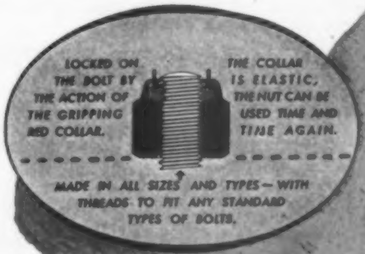
Every fastened product can be better because of these nuts – can be safer, tighter, quieter, and longer lasting.

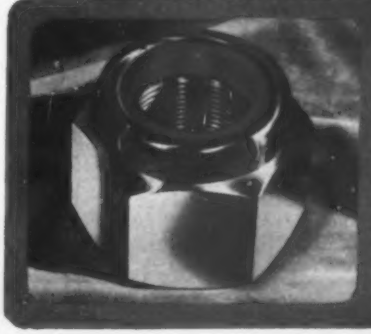
So if you have a fastening problem now, or see one ahead, let us show you how these red-collared Esna Nuts can help. Our engineers are ready to consult with you and recommend the appropriate nut.

The Clippers' powerful engines are equipped with Elastic Stop Nuts. Overhauling is simplified by the absence of pins, washers, or other auxiliaries.



*ESNA Anchor Nuts allow ready access to inspection openings, yet refasten tight and strong to carry stressed skin loads.


LOCKED ON THE BOLT BY THE ACTION OF THE GRIPPING RED COLLAR.
THE COLLAR IS ELASTIC, THE NUT CAN BE USED TIME AND TIME AGAIN.
MADE IN ALL SIZES AND TYPES – WITH THREADS TO FIT ANY STANDARD TYPES OF BOLTS.



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Write or wire Oliver L. Parks, President, for full information about Parks Air College and Parks graduates.

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Former Douglas V.P. Named Temporary Brigadier General

Bertrandias

Col. Victor E. Bertrandias, charged with operations and maintenance of transport and combat planes of the Fifth Service Area Command and a former vice president of Douglas Aircraft Co., has been nominated temporary brigadier-general by President Roosevelt. Now stationed in the South Pacific area, Col. Bertrandias has been in Australian and New Guinea war theatres for nearly two years. He received the Air Medal when he and his crew downed four Jap planes in the raid on Wewak.

Bendix Helicopter Firm Succeeds Helicopters, Inc.

Bendix Helicopter, Inc., has been formed by Vincent Bendix as successor to Helicopters, Inc., organized in 1943 to develop a new type of helicopter.

Three models are currently being engineered in the company's development program—a two-passenger, 165 hp model with a top speed of 120 mph; a 10-passenger, one-ton model of 600 hp; and a 20-passenger, two-ton airbus of 1,200 hp. The company will license and manufacture in the United States and export to foreign countries, Bendix says.

The following comprise the board of directors:

Frederick K. Barbour, John A. Clements, Laurence D. Ely, James W. Garside, Charles L. MacDonald, Robert J. Newhouse and Bendix, all of New York; Hector J. Dowd and Lloyd Maxwell of Chicago; and Edmund W. Ross and Claire L. Barnes of Detroit.

Specifications of the helicopter to be produced are listed as follows:

Capacity—two passengers and baggage; maximum speed—120 mph; cruising speed (using 75 per cent power)—100 mph; vertical climb (minimum)—480 ft. per minute; endurance at 75 per cent power—3.25 hrs.; hp—165; engine speed—2,100 rpm; rotor speed—300 rpm; tip speed—345 mph; rotor diameter—32 ft.; useful load—626 lbs.

Importance of a Seat

The structure of a pilot's seat, usually made of plywood, is under constant study in the experimental laboratories of the Materiel Command of the Army Air Forces at Wright Field. The seat bottoms are required to "take" a download of 2,800 lbs., with a maximum allowable deflection of 1¼ inches. The back, in a horizontal position, must withstand a download of 1,400 lbs., uniformly distributed, the allowed maximum deflection being ⅝ of an inch. One plywood seat recently withstood a load of 4,600 lbs. without breaking, the AAF reports.

Many Woods in C-54

More than 16 types of wood go into the building of the C-54 combat-transport plane, Douglas Aircraft Co. reveals. Chinese rattan is used in beading upholstery; paratroop benches are made from New England ash; California redwood, Washington fir, white and sugar pine from Eastern mountain slopes go into the tooling of assembly jigs, handform blocks, trim jigs, and pattern work; American spruce goes into mockups and check-jigs; Amazon River balsa is used as a filler in partitions and floorboards; American oak and basswood make partitions, paneling, and floor boards; plywood used is made from Louisiana and Michigan gum and poplar, with spruce added; native walnut and birch, and mahogany imported from the West Indies, go into interior trimmings, instrument panels, map cases, navigator's tables, battery and ammunition boxes. Mahogany also is used for pattern work and the making of wind tunnel models. Thirty per cent more wood is used today in aircraft than just a year ago, says A. O. Schroeder, Douglas woodcraft expert. Enough wood goes into a C-54 to cover a floor 72 x 72 ft., totaling 1,197 sq. ft. of plywood and 108 board ft. of other woods, he says.

Plane Uses Ton of Rubber

The modern four-motored bombing plane requires approximately one ton of compound synthetic rubber, involving 800 to 1,000 pounds of the crude material, Hycar Chemical Co., one of the largest producers of Butadiene synthetic rubber, reveals. About 20 per cent of this total is in the linings of the bullet-sealing fuel cells. Other uses: to fill in void spaces in wings; in bullet-sealing fuel, oil, and hydraulic hoses; in diaphragms, gaskets, packings, and seals for carburetors, fuel gauges, fuel pumps, oil pumps, fuel system and control system valves; in de-icing equipment, in expandable protective sleeves for landing gear, and in coverings for ignition cables.

Brake Deal Announced

Another step in the post-war plans of Aircraft Accessories Corp. to enter the auto brake equipment field have been announced by President Randolph C. Walker, reporting the acquisition of the Power Brake Division, Besler Corp., Emeryville, Cal. Besler brakes of the vacuum type will be added to Aircraft Accessories' other lines of auto brake equipment. Operations will be moved to Burbank and incorporated with other manufacturing activities of the Power Controls Division of Aircraft Accessories.

War Jobs Block Racing

Los Angeles area war industries, faced with manpower problems, welcome the cancellation of plans by the Hollywood Turf Club for a horse racing meet Aug. 25 to Nov. 2. The State Racing Commission had sanctioned the meet and manpower officials recommended the cancellation.

"The Die Is Cast!"

Plutarch has recorded Caesar's fateful decision to cross the Rubicon on his historic march to Rome: "The die is cast", he said . . . and gambled all on a blitzkrieg. Caesar won — Hitler didn't!

America has learned from each, and our guiding principle is to work for an early knockout but to prepare to win a long war. That goes for industry as well as for the fighting forces.

The die is cast at Solar to uphold America's principle and Solar workers have taken this decision to heart — adding thereby a priceless quality to brawn and skill. The tangible results are seen in new and revolutionary die-castings, constantly improving the quality of Solar airplane exhaust systems made of stainless steel. Production is at high peak, although stainless steel — perfect for the finished job — is tough on forming dies. Solar people do first things first, but prepare for the long haul . . . even looking ahead to brighter days and postwar stainless steel products, bearing the Solar trademark.

ARMY E NAVY

SOLAR

STAINLESS STEEL PRODUCTS

SOLAR AIRCRAFT COMPANY • SAN DIEGO 12, CALIF. • DES MOINES 5, IA.

Thousands of Small Planes Will be Sold by Government

4,600 Become Surplus As WTS Ends; 60 Cars Of Parts Also Offered

THIS SUMMER and fall will see the market provided with light planes which have been used in military training programs. War Training Service, alone, has approximately 4,600 light planes which became surplus June 30 and will be offered for sale. An additional "several thousand" planes used in ferry command training and as executive transports by the Army have become surplus and will be ready for sale about mid-July.

The Army surplus includes for the most part aircraft of 175 hp or more such as Stinsons, Howards, Beechcrafts and Fairchilds, which were bought by the Defense Plant Corp. for use by the Army. Spokesmen for DPC said the planes would be sold through War Training Service outlets which have been selling WTS surplus planes.

The WTS lot includes 3,300 aircraft purchased by DPC for the War Training Service Program, which became surplus June 30 when the remaining Army flight indoctrination schools were closed. An additional 300 DPC-owned planes, already surplus, have been inspected, but sales are not yet consummated.

Under present arrangements, these 3,600 planes will be offered for sale through the regional offices of CAA as rapidly as they are declared surplus and inspected. In addition 558 Navy N3N-3 aircraft, given to CAA by the Navy, will become surplus and probably be offered for sale early in September since the Naval aviation cadet program conducted by WTS does not terminate until mid-August. Finally, there are approximately 500 aircraft loaned to CAA-WTS by the Army which may either be returned or sold by WTS for the Army.

In testimony before the House subcommittee on appropriations, CAA Administrator Charles I. Stanton revealed a number of other surplus items which must be disposed of before the end of the year. These include "aircraft parts and aircraft engine parts now stored in two warehouses. It is estimated that there are at least 60 carloads of these parts." Besides office equipment in both regional and Washington offices, there are 206 autos, 150 planes, 250 parachutes and 200 flying suits used by administrative and supervisory personnel. Stanton said it had not yet been decided whether WTS or Treasury Procurement would handle the disposition of these properties.

Of the total of 5,435 planes originally purchased by DPC for the WTS program, 1,662 already had been sold by June 1, Stanton said. Congress has authorized WTS to use $560,000 of its unexpended funds after June 30 to cover expenses of liquidating the program. The Bureau of the Budget has estimated that $1,600,000 will be required to cover overall liquidation costs and that 30% or $480,000 is applicable to the Army indoctrination course and should be borne by the Army Air Forces; 35% or $560,000 is applicable to the Navy training program and should be borne by the Navy and $560,000 is applicable to the ERC instructor program and should be carried by CAA.

Besides the disposal of surpluses, there are a number of other tasks facing CAA and WTS personnel before the liquidation of the training program is complete. Termination agreements must be negotiated with the 59 instructor flight schools and the 54 ground schools whose instructor training program was suspended without advance notice. The contracts with 90 Navy flight instruction centers and ground schools and with 150 Army flight indoctrination centers must be terminated. Individual reports must be made to the Army and Navy on 2,191 Army and 996 Navy enlisted reservists employed as instructors and mechanics at WTS schools.

Sperry V.P. Promoted

James E. Webb, Vice-President of Sperry Gyroscope Co., recently was promoted from captain to major in the U. S. Marine Corps. He is shown, right, receiving his oak leaves from Col. Christian F. Schilt, commanding officer of the Ninth Marine Aircraft Wing, in a ceremony at the Marine Corps Air Station at Cherry Point, N. C. Maj. Webb also is assistant secretary-treasurer of the Sperry Corp.

RANGER AIRCRAFT ENGINES DIVISION, Fairchild Engine and Airplane Corp., reveals that many of the 6-cylinder, in-line, aircooled engines manufactured by the division are giving 900 hours of operational service before overhaul. A recent check by Ranger field representatives in the Texas-Oklahoma training area, covering 254 engines "pulled" for overhaul at 18 fields, showed the average Ranger "6" gave a bonus of 23.8 per cent more service than the 600 hours expected of it before overhaul.

WHITING
MODEL B3
3-TON
AERO HOIST

The Whiting Model B3 3-Ton Aero Hoist, engineered for use in removing and installing unusually heavy aircraft engines and parts, provides a lift of twenty feet and has a rated capacity of three tons. Collapsible construction simplifies shipping.

A unique, streamlined design eliminates all unnecessary superstructures in the aero hoist, reduces the possibility of damage to engine parts to a minimum, provides maximum accessibility from all sides. Notable construction features are the dual work platform eleven feet from the floor, riser steps, and open leg base to accommodate large engine stands or other equipment. Write for information.

Main Office and Plant: 15647 Lathrop Ave., Harvey, Ill. Western Office: 6381 Hollywood Blvd., Los Angeles, Calif. Canadian Subsidiary: Whiting Corporation (Canada), Ltd., Toronto, Ontario. Branch Offices in New York, Chicago, Buffalo, Birmingham, Pittsburgh, Detroit, Cincinnati, St. Louis, and Washington, D. C.

WHITING
CORPORATION
Aviation Division

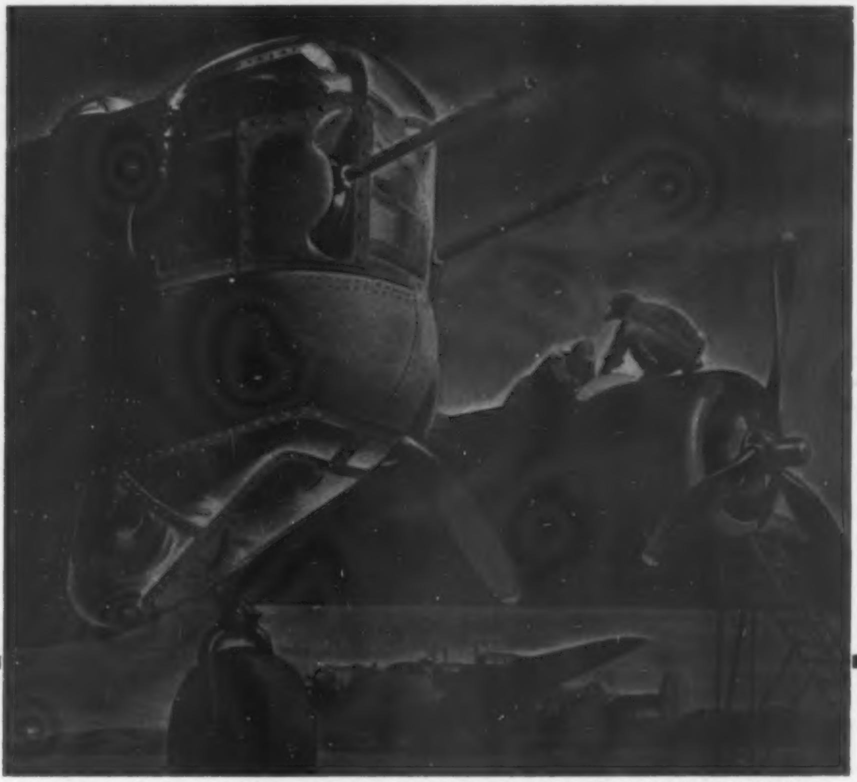

ILLUSTRATION EMERSON ELECTRIC NOSE TURRET ON A B24 LIBERATOR BOMBER
(Photo Illustration courtesy Michigan Seamless Tube Co.)

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FITCHBURG, MASS.

B-29 Gives New Meaning to Air Power

(Continued from page 32)

at Wright Field since 1935. Construction also permits an unusual degree of soundproofing and cabin heating. Boeing produced the first pressurized cabin plane in 1937—the Stratoliner which went into commercial operation in 1939. AAF asked Boeing to submit proposals for cabin pressurization of the Flying Fortress in the winter of 1938, but it was decided that the cabins should go into faster and longer range planes, which resulted in the B-29. Each crew member is equipped with an oxygen mask in case the cabin wall is punctured by enemy fire. Heat is provided by a cabin supercharger and each crew member wears a new type of electrically-heated flying suit.

Every piece of equipment on the bomber that moves is activated either by an electric motor or cables, with the exception of the breaking system, which is hydraulic. The large control surfaces are actuated "direct" by the pilot. Developed by the late Edmund T. Allen, who was Boeing's director of flight and aerodynamics and to whom goes much of the credit for development of the B-29, the control surfaces are so closely balanced aerodynamically and statically that no power or boost is required to move the controls.

"This system involves a better 'pilot feel,' with less cost, less vulnerability and less weight than the boost system," Boeing claims.

Gas and Oil by Air

Gasoline and oil for the B-29 Boeings which recently bombed Japan was flown to bases of the Super Fortresses by Curtiss C-46 Commando transport planes, the War Department has permitted Curtiss-Wright Corp. to announce. Flying the aerial Burma Road daily from India into American bases, the Commandos have formed a "flying pipeline," hauling the fuel in drums, C-W says.

"The Superfortress," the company says, "is being produced in the greatest manufacturing program ever put behind a single implement of war, involving four major companies as prime contractors operating six of the largest aircraft factories in the country."

Setting up and coordinating of this program started less than 60 days after Pearl Harbor, while Boeing was still completing the design development of the airplane, and months before the first experimental model was flown. Preparations for quantity production at Boeing's Wichita division were first authorized seven months before Pearl Harbor, while construction of the first three experimental models was just getting underway at the Boeing plant in Seattle.

The five plants building the B-29 are Boeing's factories at Seattle and Renton, Wash., and Wichita; the Glenn L. Martin plant in Omaha, Neb., and the new Bell Aircraft Co. factory in Marietta, Ga. The Fisher Body Division of General Motors is playing an important role in fabrication of sub-assemblies. In addition, hundreds of sub-contractors, vendors, and suppliers are included in the program.

Boeing's Seattle plant, which has been the hub of B-17 Fortress production, is being converted to the B-29 program, and on completion of the conversion all Boeing facilities will be devoted exclusively to the B-29. Douglas Aircraft Co. and Lockheed Aircraft's Factory A (formerly Vega) will continue to build Fortresses.

For the development of the B-29, Boeing gives credit to P. G. Johnson, Boeing president, "who has been a moving factor in the B-29 program since the day of its inception"; C. L. Egtvedt, chairman of the board, who is credited with being the "father" of the Flying Fortress; H. O. West, executive vice president, who directs the manufacturing phases of the B-29 program; Wellwood E. Beall, vice president-engineering, who has had overall direction of the development and engineering of the bomber; J. E. Schaefer, vice president of Boeing and general manager of the Wichita division, the first Boeing plant to go into B-29 production; F. P. Laudan, vice president and manager of the Renton division. Edward C. Wells, Boeing's chief engineer; F. B. Collins, sales manager and representative of the parent company on the B-29 committee, which coordinates the entire joint program of all participating companies and plants; H. F. Brown, Boeing-Wichita works manager, and E. M. Allison, test pilot.

Members of the Aviation Writers Association were given a preview of the B-29 at Wichita on May 4-5-6, including an hour's flight.

Manufacturers making parts for the Superfortress are:

Chandler-Evans Corp. (carburetors); Maytag Co. (motor driven retracting units); General Electric Co. (multiple-gun power turrets and computing devices for gunfire control); De Sota Division of Chrysler Corp. (entire front end assembly, including nose cabin section); Dodge-Chicago Chrysler Plant (engines); Minneapolis-Honeywell Regulator Co. (electronic instruments). Libby-Owens-Ford Glass Co. (glass noses).

Gasoline and oil for the B-29's was flown to their bases by Curtiss C-46 Commando planes.

25,000 Motors Ordered

Twenty-five thousand model aircraft motors for pre-induction and pre-flight training will be produced in the third and fourth quarters of 1944, the War Production Board reports. "In view of the fact that this is approximately 20 per cent of normal production, it is important that the limited output be channeled to sources through which the greatest number of students may be reached," WPB said.

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With Lear gearing it can handle a quarter-ton load.

And it has to be ready to do that in an instant. Because this motor moves control flaps, and heater shutters on warplanes. And air pressures mount high at the speed these ships fly.

On aircraft, even the weight of a coat of paint has to be considered. So this motor had to be light.

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Designing it meant starting from scratch. There was no precedent for this kind of engineering.

You may never need a motor like this. It may cost more than you might want to pay.

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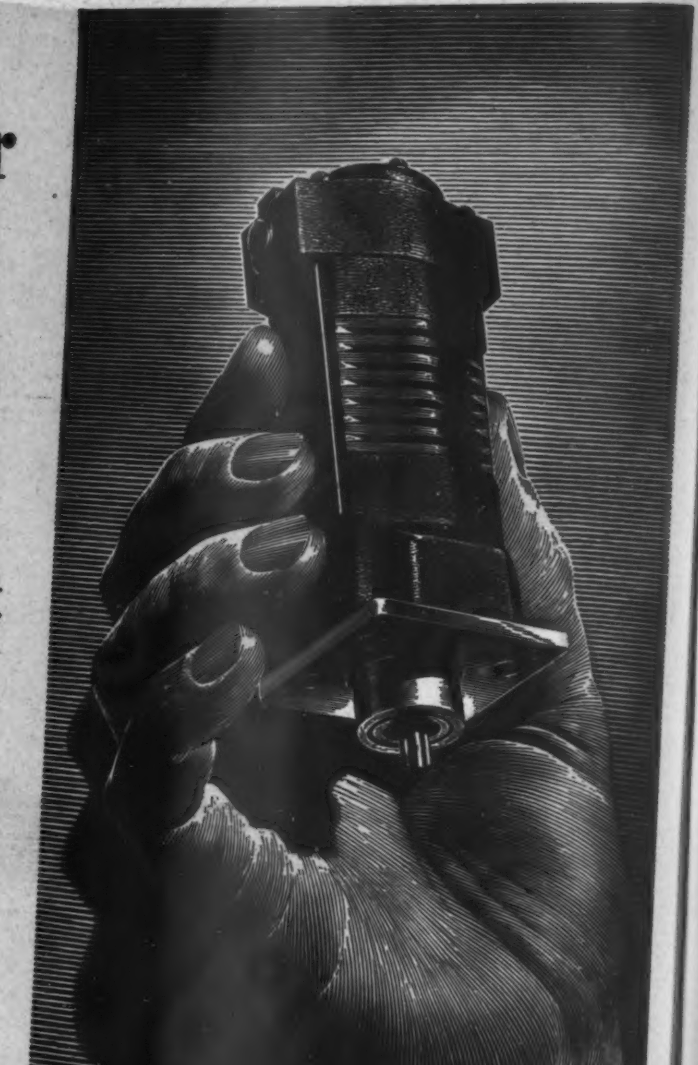
And equally important, we want you to know that there is available the kind of engineering thinking that could conceive and produce it.

PLANTS: Piqua, O., and Grand Rapids, Mich. BRANCHES AT: New York, Los Angeles, Chicago, Detroit, Cleveland, Providence.



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INC.
PIQUA · OHIO

Manufacturing Personnel

Frantz

Johnson

Huested

Gates

Steinhauer

Irvin

Louis H. Gitzinger has been named head of installation engineering for Pratt and Whitney Aircraft Division of United Aircraft Corp. **John M. Tyler** has been appointed installation consulting engineer, and **A. L. Mac Clain**, liaison engineer. **Reynold L. Caleen** is Pratt and Whitney's new chief of performance and installation requirements, with **N. J. den Tex** as installation requirements engineer; **O. C. Christiansen**, engine performance engineer; and **D. S. Conrad**, airplane performance engineer. **C. J. Swigert** is chief of installation test operations; **V. E. Thornburg**, installation analysis engineer; and **John B. Cutting**, operating instructions engineer.

Leon Wallerstein, Jr., has been placed in charge of the development laboratory of the Lord Manunfacturing Co., and **Paul C. Roche** has been promoted to chief field engineer. The Lord company has promoted **R. C. Henshaw** to head up product design and development engineering. **Tom Yates**, formerly senior sales engineer, has left the company to accept a position in the sales department of Skinner Engine Co.

Dee Breen, who as a member of the Signal Corps helped set up the Army and Navy Electronic Production Agency in Washington, has been appointed Western division salesmanager for Littelfuse, Inc. Before the war, Breen was with Chrysler Corp.

H. C. Gates, formerly plant superintendent of Automatic Fan and Bearing Co., has been named factory manager for the Aeroquip Corp., Jackson, Mich.

Melvin J. Storz has been named manager of the public relations division of Wright Aeronautical Corp., succeeding **Richard S. Huested**, who was recently appointed manager of the Washington office of Curtiss-Wright Corp. **Louis G. Raiche** has been appointed director of quality for C-W's airplane division. **Myron B. Gordon** has resigned as vice president and general manager of Wright Aeronautical.

John M. Hagan, well known in private flying circles from coast to coast, has resigned as executive assistant of Aeronca Aircraft Corp.

Paul E. Frantz, for 15 years chief engineer of the Apex Electrical Manufacturing Co., Cleveland, has been appointed operations manager of Adel Precision Products Corp.

George W. Garvin is the new sales manager of Aero Products Division, Talon, Inc. **T. R. Carlson** is chief engineer of the division, and **Frank E. Lewis** is production superintendent of cowl fasteners.

C. W. "Slim" Freitag, vice president in charge of sales for Howard Aircraft Corp., has resigned and will announce his future plans shortly.

Alfredo de los Rios, founder of the Inter-American Escadrille and until recently attached to the Office of the Coordinator of Inter-American Affairs, has joined the foreign sales staff of Fairchild Engine and Airplane Corp. **J. Earl Steinhauer**, assistant manager of Washington National Airport, has joined Fairchild and is assigned to the company's Hagerstown, Md., plant.

R. T. Dunlap has been promoted from vice president and general superintendent of the Buffalo district of Wickwire Spencer Steel Co. to vice president in charge of production. **A. G. Bussman**, assistant to the executive vice presisdent, has been advanced to assistant to the president.

Dale Armstrong, for the past year director of information for the West Coast Aircraft War Production Council, has joined Northrop Aircraft to head up a new public relations program.

G. G. Cudhea, formerly assistant chief engineer of Fleetwings Division, Kaiser Cargo, Inc., has been appointed chief engineer, succeeding **R. W. Ayer**, who has joined American Airlines. **G. S. Thompson**, chief design engineer, has been named assistant chief engineer. **G. Nonini** is now chief production engineer in charge of all production design.

Stanley E. Hanawalt has been appointed Dayton representative of the Jordonoff Aviation Corp. He was formerly connected with the Maintenance Data Section, Patterson Field, Dayton.

V. A. Kemmerrer has resigned from Lockheed Aircraft Corp. after many years with that company.

Lauren D. Lyman of United Aircraft Corp. has returned from a nine week's trip to England.

Howard M. Kincheloe has been appointed chief of flight and field operations at the Allentown Division, Consolidated Vultee Aircraft Corp. **J. M. Langseth** has been named superintendent of detailed fabrication at Allentown, and **E. F. Mussen** has been appointed general foreman of bench assembly. Convair also announces appointment of **A. R. Johnson** as works manager of its Miami Division, and **George A. Irvin** as chief industrial engineer of its Vultee Field division.

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COX AND STEVENS AIRCRAFT CORPORATION
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Proud of his "Connie"

Milo Burcham, chief test pilot at Lockheed, looks at a Constellation model. He has done most of the engineering flights on both the "Connie" and the P-38.

Eastern to Operate St. Louis-Washington

Eastern Air Lines planned to inaugurate service over its new route between Louisville, Ky., and Washington, via Lexington-Frankfort and Charleston, W. Va., July 1, company officials announced. CAB recently issued an order that the needs of national defense no longer required a delay in inaugurating the service. Eastern was granted the certificate for this route, an extension of Route No. 47, last year. In permitting the inauguration of the Louisville-Washington service, the Board also lifted its wartime restriction on Eastern's route between St. Louis and Louisville, via Evansville, Ind. Eastern was to operate one trip a day beginning July 1 and tw otrips a day after July 15.

PAA Sets Record in Colombia

Pan American Airways announces movement of 271 passengers in one day on the route from Bogota to Medellin through its affiliate Aerovias Nacionales de Colombia (Avianca). PAA claims this is a new record for air transportation in Colombia. The mark was established during the nationwide Industrial Exposition held in Medellin around the first of the year, when Avianca transported an orchestra of 73 musicians, the National Ballet of 25 artists, and 33 players of the National Variety Show Co.

New L. A. Materiel Office

A new Los Angeles area office has been established by the Army Air Forces Materiel Command to consolidate the activities and personnel of six former area offices in and near Los Angeles. Address of the office is District Headquarters Bldg., 3636 Beverly Blvd., Los Angeles.

Form Information Council

Public relations men of the Aeronautical Training Society formed an Eastern Information Council at the ATS semi-annual conference in New Orleans last month, with Carl R. Anderson, assistant vice-president of Embry-Riddle Co., Miami, as chairman.

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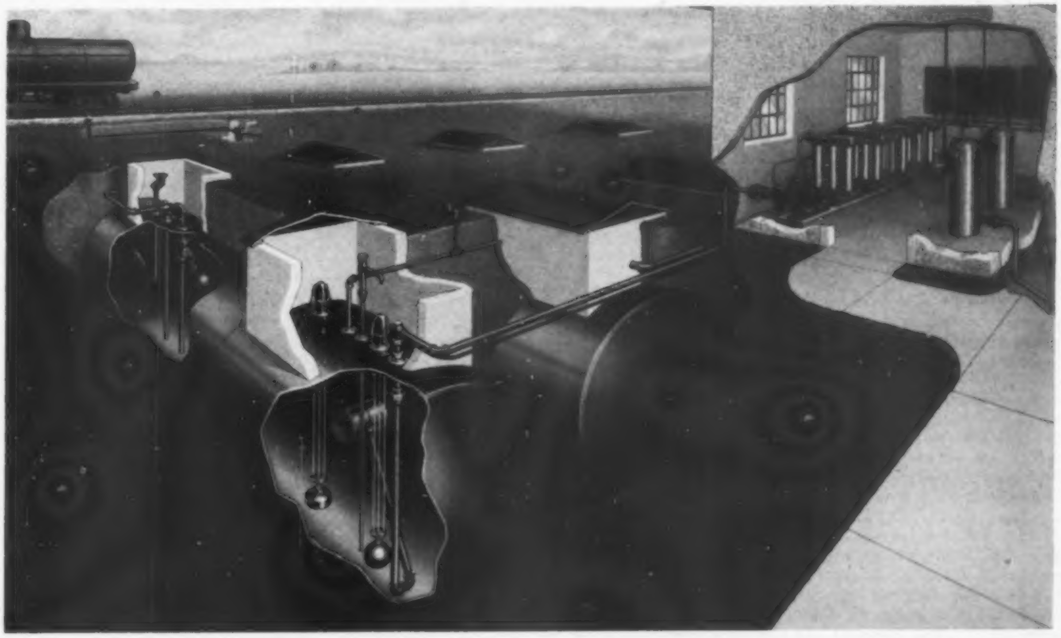
CLEAN, DRY, SAFE FUEL—A strainer, placed in the suction line ahead of the pump, catches any heavy particles, and any remaining dirt or free moisture is removed by the Bowser Centrifugal Filter. Removal of impurities and free moisture while the gasoline is being delivered is your conclusive assurance of clean, dry, safe fuel.

DEPENDABILITY—The dependability of Bowser Aviation Fueling Systems is supported by the company's experience as liquid control specialists since 1885, and by its specific experience in the fueling of planes, since the birth of the aviation industry. AVIATION DIVISION, BOWSER, INC., Fort Wayne 5, Indiana.



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Manufacturing Digest

CHERRY RIVET CO. announces the election of James R. Page, Robert S. Burns, George B. White, and Howard F. Isham as directors. Page is a businessman; Burns, a lawyer and steel company executive; White, a patent attorney; and Isham, a printing executive.

PRATT AND WHITNEY DIVISION, United Aircraft Corp., reveals that during 1943 its engines were installed in 65% of the nation's four-engined heavy bombers, 57% of the two-engined medium bombers, 99% of the four-engined transports, 49% of the one and two-engined transports, and 49% of the single-engined fighters.

BREWSTER AERONAUTICAL CORP. has named James Work chairman of the board, succeeding Harry Morton, resigned. A. B. Cipriani has been elected vice-president, in addition to his duties as controller. The board of directors has been reduced from nine to five.

BENDIX AVIATION CORP. reveals that production is around $75,000,000 a month, approximately the same rate as that of the 1943 fiscal year end, while unfilled orders are equal to about 10 months' output. The backlog of unfilled orders has declined from $1,018,900,000 on Sept. 30, 1943 to approximately $75,000,000 at present as a result of cutbacks in war contracts.

CONSOLIDATED VULTEE AIRCRAFT CORP. reports that the San Diego city school council and the War Manpower Commission has permitted high school boys and girls, 16 years of age and over, to work during the summer at its San Diego plant. Teen-aged girls are working in the plant for the first time. They are given careful guidance by women counsellors. All students work a 48-hour week.

CURTISS-WRIGHT CORP., Propeller Division, reveals that the Northrop Black Widow is the first twin-engined fighter yet announced to have four-bladed propellers. They are automatic constant-speed types 12 ft., inches in diameter.

FIRESTONE TIRE AND RUBBER CO. reveals that glass has been put to work in bullet-sealing oil tanks at a job that was "too tough for metal." The oil tanks have been more of a problem than the gasoline tanks, Firestone says. Because oil is heavier than gasoline, and because oil tanks are smaller than those needed for gasoline, the impact of a bullet on the oil tanks causes a "very high" hydraulic ram or shock.

UNITED STATES PLYWOOD CORP. has been permitted by the War Department to reveal that the tail assemblies or "fins" of rocket-targets, now being used for anti-aircraft gunnery practice in place of sleeve targets towed by an airplane, are made of plywood. The company has filled orders totaling 2,400,000. "U. S. Army experts estimate that 2,000,000 pounds of critical materials have been saved by use of plywood tail assemblies in the rocket-target," USPC reports.

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AIRCRAFT EXECUTIVE—Pilot, 37 years old, 7 years experience manufacture, overhaul, modification. Desires connection in overhaul or operations base work, preferably outside United States, or in post-war planning project. Could build crew if necessary. Salary secondary to long range prospects and desirability of position. Write Box 375, AMERICAN AVIATION, American Building, Washington 4, D. C.

AERONAUTICAL ENGINEER—Must have certain amount of executive capability; draft exempt. Young man, willing to learn, preferred. Excellent opportunity for right party. Address Box 377, AMERICAN AVIATION, American Building, Washington 4, D. C.

HELICOPTER PROJECT ENGINEER—No helicopter experience required but must have extensive record in the successful project management of Army-Navy airplane projects and certificate of availability. Pennsylvania aircraft manufacturer. Write Box 379 AMERICAN AVIATION, American Building, Washington 4, D. C.